A QUALITATIVE STUDY OF EMOTIONAL EXPERIENCES DURING THE PRE-PSYCHOTIC PERIOD

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ABSTRACT

Psychosis typically emerges after a heterogeneous range of premonitory symptoms. This has been labelled the 'pre-psychotic period' (PPP). Emotional disturbances are prominent features of this state and have shown to be risk factors for psychosis. The present study had two interrelated aims: to explore in-depth the experiential nature of the emotional changes that occur during the PPP; and to examine whether there are similarities between these pre-psychotic emotional changes and the concept of delusional atmosphere. Twelve men experiencing first-episode psychosis with delusional thought content were recruited for the study. Information regarding their emotional experiences during the PPP was gathered using a semi-structured interview format. Corroborating information about observable changes in the men's behaviour during the PPP was also gathered from a family member or friend of theirs who had close contact with them during this time. The data was analysed using interpretative phenomenological analysis. A variety of strong emotional changes were reported during the PPP, including depression, anxiety, anger, and guilt, as well as love and happiness. Negative emotions were prominent during this time, but positive emotions were also found to be a feature of this state for some people. Overall, the PPP was characterised by an increase in distress over time. Features of delusional atmosphere that were evident during the PPP included: experiences of derealisation and the environment feeling different; anxiety and confusion and a drive to find and explanation for the changes that were being experienced; and a sense of apprehension that something significant was about to happen. The relevance of these findings to researchers and clinicians working in this area is discussed.

To my wife, Lorena

In loving memory of my mother, Clare,
who loved me enough to teach me standards

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CHAPTER ONE: INTRODUCTION AND OVERVIEW

Psychotic disorders are considered among the most serious of all mental disorders. They are associated with considerable emotional distress and have a debilitating effect on peoples lives (Mental Health Commission, 1999). These disorders are also associated with high levels of morbidity and mortality and represent a considerable economic burden to society (Carr, Neil, Halpin, Holmes, & Lewin, 2003).

It has long been acknowledged that psychosis typically emerges after the culmination of a heterogeneous range of premonitory symptoms and psychopathological events (Jackson, McGorry, & Dudgeon, 1995; Yung & McGorry, 1996a). This 'pre-psychotic period' (PPP) has been described as a departure from an individual's normal functioning and subjective experiences, and is characterised by atypical cognitions, sensations, moods, and motor acts that are transient in nature and can be difficult to describe (Beiser, Erikson, Fleming, & Iacono, 1993; Fuentenebro & Berrios, 1995; Loebel et al., 1992; Yung & McGorry, 1996a).

Over the past decade there has been growing interest in understanding more about the PPP. Research in this area has been primarily aimed at identifying its core clinical features and key prognostic indicators in order to develop early identification and treatment strategies for people at risk of developing psychosis (Gross, 1997; McGorry, McKenzie, Jackson, Waddell, & Curry, 2000; Pelosi & Birchwood, 2003; Wyatt & Henter, 2001). Studies have shown that early intervention can attenuate the intensity and duration of the psychotic illness (Jackson et al., 1998; Larsen et al., 2000; McGorry & Edwards, 1998) and in some instances may prevent it altogether (McGorry, Yung, Phillips, Yuen, & Francey,

2002; Morrison et al., 2002). Early intervention has also been attributed to reducing the overall cost of treating psychosis and minimising the iatrogenic effects associated with traditional treatment approaches such as involuntary hospitalisation (Bosanquet, 2002).

A review of the literature indicates that emotional disturbances, in particular depression, anxiety, and irritability are prominent features of the PPP (Jackson et al., 1995; Stanton & David, 2000; Tan & Ang, 2001; Yung & McGorry, 1996a). First of all emotional disturbances have been found to be highly prevalent during this time. Yung and McGorry (1996) list depression as the third most common symptom experienced by people during the PPP and identify anxiety and irritability among the nine most common symptoms found during this time. This research corroborates phenomenological studies and experiential accounts of the PPP which commonly report negative emotional experiences during this time (Mclean, 2003; Parnas, Jansson, Sass, & Hardest, 1998; Stanton & David, 2000). As well as being highly prevalent during the PPP, emotional disturbances have been closely related to the onset of psychotic symptoms (Freeman & Garety, 2003). In particular, anxiety and to a lesser degree depression have been shown to be risk factors for developing psychosis (Birchwood & Iqbal, 1998; Jones, Rodgers, Murray, & Marmot, 1994; Krabbendam, Janssen, Bijl, de Graaf, & van Os, 2002; Poulton et al., 2000; Turnbull & Bebbington, 2001). Based on these findings it has been suggested that emotional disturbances may be intrinsically involved in the development of psychosis (Freeman & Garety, 2003).

The suggestion that there is an etiological link between emotional disturbances and the development of psychosis is by no means novel. For over one hundred years a variety of theories have been proposed suggesting just such a relationship (Berrios, 1996). These

theories have generally adhered to one of three main schools of thought and have been categorised as either dynamic, defence, and direct theories (Berner, 1991; Fuentenebro & Berrios, 1995).

The dynamic school of thought emerged from German phenomenological literature during the first part of the twentieth century. These theories suggested that the PPP primarily involves non-specific affective and mood related changes (Fuentenebro & Berrios, 1995). It is hypothesised that over time these abnormal emotional experiences disrupt the processing of information and the linearity of logical thinking, loosening the capacity to form associations between mental constructs, and thereby producing delusions and other psychotic symptoms.

Defence theories evolved from the psychodynamic paradigm during the first part of the twentieth century and suggest that psychotic symptoms act as protective mechanisms to intense negative emotional experiences (Lapidus & Schmolling, 1975). By offering an alternative interpretation of reality, psychotic phenomena are believed to prevent distressing emotions from entering into an individual's consciousness. It is believed that the onset of psychosis represents a regression from adequate levels of ego functioning where reality based psychological defences become unstable (Arieti, 1974).

Finally, direct theories emerged during the middle half of the twentieth century. Direct theories propose that prolonged levels of high arousal, which are often associated with emotional distress, lead to cognitive disturbances such as a loosening of associations, dissociation, and deficits in attention (Lapidus & Schmolling, 1975). These disturbances, in combination with physical exhaustion and restlessness, impair an individual's ability to

effectively manage sensory input and eventually lead to the development of hallucinations and delusions.

During the latter half of the twentieth century interest in the role of emotional disturbances in the development of psychosis waned (Turnbull & Bebbington, 2001). Reviews of the aforementioned theories tended to show that none of them were fully supported and the research on which they were based often used methodologies and experimental designs that were complex and conflicting (Garety & Freeman, 1999; Lapidus & Schmolling, 1975). During this time, with the ascendancy of the cognitive paradigm to the study of psychosis, the majority of research conducted in this area was devoted to identifying perceptual and cognitive disturbances associated with this condition (Bentall, Kinderman, & Kaney, 1994; Frith, 1992; Garety & Hemsley, 1994; Maher, 1988). For the most part these studies considered emotional disturbances to be secondary outcomes to the underlying cognitive disturbances or an understandable reaction to experiencing psychotic symptomatology.

Recently, Daniel Freeman, Philippa Garety, and their colleagues (Freeman, Garety, Kuipers, Fowler, & Bebbington, 2002; Garety, Kuipers, Fowler, Freeman, & Bebbington, 2001) brought the study of emotional disturbances in the development of psychosis back to the fore by offering a multifactorial theory of delusions and hallucinations that suggests a causative role for emotional disturbances. Their model is quiet complex, combining recent cognitive models of psychosis with earlier emotion-based theories, as well as neurobiological and social levels of explanation (Garety & Freeman, 1999; Garety et al., 2001; Roberts, 1992; Trower & Chadwick, 1995). It primarily adheres to the direct school of thought regarding the role of emotional disturbances in the role of psychosis, suggesting

that high levels of emotional distress in combination with cognitive disturbances lead to psychosis. Emotional disturbances are also suggested to underlie the content of the emergent psychotic symptoms as well. At present, the model proposed by Freeman, Garety, and colleagues (Freeman et al., 2002; Garety et al., 2001) is highly speculative, but plausible given the current corpus of knowledge on the development of hallucinations and delusions.

After reviewing the corpus of literature examining the role of emotional disturbances in the development of psychosis, Freeman and Garety (2003) conclude that the development of psychosis most likely involves a range of common emotional changes in combination with a number of psychological processes unique to the onset of psychosis. However, few attempts have been made to examine in detail emotional disturbances during the PPP and at this stage the exact nature of the emotional changes that occur during this time is unclear (Freeman & Garety, 2003). It has been suggested that a more detailed understanding of these pre-psychotic emotional changes will advance this area of study (Freeman & Garety, 2003; Freeman et al., 2002; Garety & Freeman, 1999; Jackson, McGorry, & McKenzie, 1994). Such a study would also add to the New Zealand research examining psychosis and schizophrenia. There is a growing body of New Zealand research on this topic (Geekie, 2004; Mental Health Commission, 1999; Read, Agar, Argyle, & Aderhold, 2003; Wheeler, Robinson, & Robinson, 2005) and a study specifically examining the PPP would add value to this body of literature.

A concept that may be relevant to this area of study is delusional atmosphere (*Wahnstimmung*), or delusional mood as it is also known (Berrios, 1994; Fuentenebro & Berrios, 1995). The concept of delusional atmosphere has been used in German

psychiatric literature for over 120 years. However, Jaspers (1913/1963) has been credited for bring this construct to the fore by offering an account of delusions, with delusional atmosphere being a central feature (Berner, 1991; Mellor, 1991). Jaspers (1913/1963) defined delusional atmosphere as a range of primary sensations, feelings, moods, and awarenesses that have a vague, near ineffable content, but occur alongside a sense that there is some objective validity and meaning to them. He believed this state is characterised by powerful emotional experiences that include an uncomfortable apprehension that there is something 'sinister' afoot. Since Jaspers' (1913/1963) account, delusional atmosphere has been reviewed and further described by many researchers and clinicians (Berner, 1991; Berrios, 1996; Fuentenebro & Berrios, 1995; Lange, 1942; Mauz, 1931; Mellor, 1991; Schneider, 1959; Sims, 2003; Wetzel, 1922). This concept has very rarely been the topic of direct inquiry though, and at this stage it is unclear whether it is a useful way of conceptualising the emotional changes that occur during the PPP, prior to the onset of delusions.

The present study aims to contribute to the research in this area in two ways. The primary aim of the present study is to explore in-depth the experiential nature of the emotional changes that occur during the PPP. Secondary to this aim, the present study will examine whether there are similarities between experiential accounts of the emotional changes that occur during the PPP and the concept of delusional atmosphere. The specific research questions related to these two aims are: 1) what is the experiential nature of the emotional changes that occur during the PPP? And 2) what features of delusional atmosphere are consistent with experiential accounts of the emotional changes that occur during the PPP?

The following chapters of this literature review will examine the research in this area in more detail. Chapter two will offer a brief introduction to psychosis as a means of orienting the reader to this topic of inquiry. Chapter three will present a summary of the literature examining the PPP, including the recent research highlighting the prominence of emotional disturbances during this time. Chapter four will review the various theories that have suggested an etiological relationship between emotional disturbances and psychosis. Chapter five will introduce the concept of delusional atmosphere and will review Jaspers' (1913/1963) account of this concept and his theory of delusions, as well as more recent literature in this area. Finally, chapter six will reiterate the aims of the present study and outline the chosen research design and method of data analysis.

CHAPTER TWO: A BRIEF INTRODUCTION TO PSYCHOSIS

Before the literature on the pre-psychotic period can be explored in detail it is necessary to provide a brief overview of psychosis itself. This chapter will begin by introducing the concept of psychosis. The literature examining its epidemiology and course will then be examined. This chapter will conclude with an overview of the various symptoms associated with this condition.

Defining Psychosis

The term 'psychosis' was first coined by an Austrian Psychiatrist, Ernst van Feuchtersleben (1806-1849) in 1845 in reference to a range of co-occurring psychopathological symptoms characterized by disturbances in reality (Bromet, Dew, & Eaton, 1995). Since then, psychosis has been defined in a variety of ways, using a range of terminology (American Psychiatric Association, 2000; E. Bleuler, 1950; Carpenter, Strauss, & Bartko, 1970; Feighner, Robins, & Guze, 1972; Kaplan & Sadock, 1998; Kraepelin, 1913; McKenna, 1994; Schneider, 1959; Spitzer, 1975; Taylor & Abrams, 1978). Most modern definitions of psychosis are underpinned by Kraepelin's (1913) concept of dementia praecox and based on Blueler's (1950) concept of schizophrenia (Barlow & Durand, 2002; Bentall, 2003). Such definitions of psychosis are characterised by a broad spectrum of cognitive, emotional, and behavioural symptoms, including delusions, perceptual disturbances, disorganized and catatonic behaviour, formal thought disorder, inappropriate affect, and disturbances in consciousness. Due to the wide range of symptoms that are associated with this condition and the tendency for these symptoms to

present in a heterogeneous manner, researchers have found it difficult to identify the core psychopathological features of this condition. At present no one definition of psychosis has received universal acceptance (Bentall, 2003).

Due to the difficulties researchers have had in defining and operationalising psychosis it is important to note that what is known about this condition has almost exclusively come from studies that have adopted diagnostic and categorically based definitions of this condition. The most common definitions of psychosis used in this area are those offered by the Diagnostic and Statistical Manual of mental Disorders (American Psychiatric Association, 2000) and the International Classification of Diseases (World Health Organisation, 1992). It has been suggested that because of the reliance on diagnostic definitions of psychosis, the previous research in this area has examined only a small number of people with this condition and that the current corpus of knowledge on psychosis represents a restricted view of the true experiential nature of this condition (Bentall, 2003; Boyle, 2002; Bromet et al., 1995).

Epidemiology

The basic epidemiological features of psychosis are reasonably well understood. Large-scale studies in this area indicate that approximately 40 to 50 out of every 100,000 people receive a diagnosis of psychosis each year (Bromet et al., 1995; Jablensky, 1992). The estimated lifetime prevalence of this condition is in the region of one percent of the general population (Haefner & Heiden, 1997; McKenna, 1994; Warner & de Girolamo, 1995). In general, the prevalence of psychosis has not shown to vary greatly across the world, including New Zealand, and appears to have remained stable over the past 50 years

(Haefner & Heiden, 1997; Wheeler et al., 2005). Psychosis often develops during the middle to late adolescence and early adulthood. The mean age of onset generally falls between 15 and 35 years (Barlow & Durand, 2002). The incidence of psychosis has been shown to steadily decrease in both directions outside this age bracket (Harrop & Trower, 2001; Varma et al., 1997).

Four major themes related to the epidemiology of psychosis have been reported in the literature. First of all, there appears to be an inverse relationship between social class and the incidence of psychosis. People from the lowest social classes have been shown to be up to three times more likely to develop psychosis than those from the upper social classes (Bromet et al., 1995; Eaton, Day, & Kramer, 1988). Social disadvantage and low standards housing have been closely associated with this condition (Boydell et al., 2001; Haefner & Heiden, 1997; Hickling, McKenzie, Mullen, & Murray, 1999). There is much debate over the direction of this relationship; whether social decline occurs as a result psychosis or is an antecedent factor in the development of this condition. These two hypotheses have been labelled the social drift and social cause theories respectively. At present both theories have received some degree of research support (Browne, Miller, & Maguin, 1999).

Secondly, the incidence of psychosis is significantly higher in urban areas than rural areas (Haefner & Heiden, 1997; Varma et al., 1997). Besides the obvious physical differences in these environments other variables that may account for this finding include differences in the availability of mental health services, selective migration, and the higher levels of exogenous stressors and adverse life events that are experienced by people living in urban environments (Browne et al., 1999). Recent research in this area suggests that

there may be a dose-response relationship between urbanicity and the onset of psychosis (Pedersen & Mortensen, 2001). These researchers found that the greater proportion of a person's childhood spent in an urban environment, the greater the risk they have of developing psychosis.

Thirdly, a large number of studies have shown that ethnic minorities are significantly more likely to be diagnosed with schizophrenia than members of the dominant culture (Read, 2004). This finding has been shown across a wide variety of countries. People from ethnic minorities in western cultures are between two and nine times more likely to receive a diagnosis of schizophrenia (Goodman, 1983; Strakowski, 1993; Thomas, 1993). In New Zealand studies have shown that Maori inpatients are twice as likely to be diagnosed with schizophrenia than their European counterparts (Te Puni Kokori, 1993; Wheeler et al., 2005). Another New Zealand study examined 200 outpatients and found that Maori and Pacific Islanders were also three times more likely than their European counterparts to be compulsorily treated using the Mental Health Act (Read et al., 2003). A number of factors have been purported to account for the tendency for ethnic minorities to be diagnosed with schizophrenia more than members of the dominant culture. These include genetic factors, issues related with migrating to a foreign country, racism, and factors associated with biases in diagnostic practices. A recent review of this literature suggests that a combination of racism and poverty likely contributes the most to this finding (McKenzie & Murray, 1999).

Finally, research examining gender differences report higher rates of psychosis in males than females with an average male to female ratio of three to one (Bromet et al., 1995; Haefner & Heiden, 1997). These studies have shown that onset of psychosis in men

tends to start earlier than females and rises more steeply. The lifetime risk of psychosis beyond the age of 50 appears to be the same for both men and women (Browne et al., 1999).

Course

The onset of psychosis generally occurs after a pre-psychotic period characterised by non-specific changes in a person's mental state and behaviour (Mental Health Commission, 1999; Yung & McGorry, 1996b). The pre-psychotic period is discussed further in chapter three. After the onset of florid psychotic features the course of psychosis has been shown to be heterogeneous. Three general trajectories of psychosis have been identified though (M. Bleuler, 1978; Ciompi, 1980; Harding, Brook, Ashikaga, Strauss, & Breier, 1987b). First of all, simple or chronic courses are characterised by a steady progression with little or no remission. Secondly, undulating or episodic courses are characterised by one or more episodes of psychosis over time that are followed by either incomplete recovery or complete recovery. Finally atypical courses of psychosis are idiosyncratic and represent a combination of the two aforementioned courses. Studies in this area have shown that approximately half of all the people with psychosis recover over time and only a small number of people follow a course of marginal or deteriorating functioning (McKenna, 1994; Shepherd, Watt, Falloon, & Smeeton, 1989).

The Symptoms of Psychosis

A wide variety of symptoms are associated with psychosis. These include delusional beliefs, perceptual disturbances, catatonia and other disturbances in motor

functioning and volition, formal thought disorders, emotional disturbances, and disturbances of consciousness. There is large amount of variation in the presence of these symptoms across people and one person may present with a combination of different symptoms over time (Andreasen, Roy, & Flaum, 1995).

Delusional Beliefs

Of all the symptoms of psychosis, delusions are by far the most common, occurring in approximately 90% of all people who experience this condition (Cutting, 1995; Gutierrez-Lobos, Schmid-Siegal, Bankier, & Walter, 2001). At the most basic level, delusions are considered to arise out of the processes of thinking and judgment formation, and are generally defined as false beliefs about external reality that are held in spite of incontrovertible and obvious proof to the contrary (Cutting, 1995; Sims, 2003). The content of delusions varies widely. Themes of persecution have been shown to be the most common followed by delusions of reference, misidentification, and grandiosity (McKenna, 1994). Less common themes include infidelity, love, poverty, control, illness, and infestation (Sims, 2003; Verdoux & van Os, 2002). Studies have shown that females are more likely to experience delusions of persecution and love (De Clerambault's syndrome), while males present more frequently with delusions of grandeur and jealousy (Gutierrez-Lobos et al., 2001). Age also appears to impact on the content of delusions. Hypochondriacal delusions have been shown to be more common in the youngest and oldest people affected by psychosis (Gutierrez-Lobos et al., 2001; Musalek, Berner, & Katschnig, 1989).

Perceptual Disturbances

Perceptual disturbances in psychosis are typically categorised as either sensory distortions where a 'real' object is perceived in a distorted way or false perceptions where perception occurs independent of an external stimulus (Sims, 2003). Three types of sensory distortions are identified by Sims (2003). First of all, anomalous experiences are characterised by a change in the intensity or quality of a real percept. Such distortions include changes in colour, size, shape, or loudness of the percept. Secondly, sensory distortions can involve experiencing emotions that are inconsistent with a percept. Commonly reported examples of this include inappropriate feels of enjoyment or dislike towards a percept. The final sensory distortion described by Sims (2003) is the splitting of perception. This represents a disturbance in the usual links between related percepts in different modalities. This results in percepts appearing separate and in conflict with one another. Splitting between the auditory and visual percepts from one source of stimulus such as a television is an example of this. Studies have shown that sensory splitting is rarer than the other types of sensory distortion (Sims, 2003).

False perceptions, or hallucinations as they are commonly known, are defined as perceptions of objects without these objects being present in the person's perceptual field (Cutting, 1997; Sims, 2003). Hallucinations are seen to represent faulty judgments about the origin of internal perceptions and are associated with a failure to discriminate between internal experiences and external sources of information (Barlow & Durand, 2002; Bentall, 1990). Hallucinations can involve any of the senses and can vary in relation to timing, content, and whether they are precipitated by a sensory stimulus or not (Cutting, 1995). Auditory hallucinations are one of the most common forms of perceptual disturbances and

are experienced by approximately half of all people with this condition (Barlow & Durand, 2002; Bromet et al., 1995). Visual hallucinations are less common and are experienced by approximately 15% of this population (Bromet et al., 1995). Visual hallucinations can range form the presence of spots or lines across a persons perceptual field through to human figures and panoramic scenes (McKenna, 1994). Perceptual disturbances involving the other senses, for example olfactory and tactile hallucinations, are relatively rare.

Catatonia and Other Disturbances in Motor Functioning and Volition

Research indicates that between 5 and 10% of people with psychosis experience motor and behavioural disturbances, volitional problems, and extrapyramidal movement disorders (Guggenheim & Barbigian, 1974; Rogers, 1992). The majority of these symptoms can be categorised under the heading of catatonia.

Catatonic symptoms range from relatively simple disorders of movement through to very complex disorders of overall behaviour (McKenna, 1994; Rogers, 1992). Simple disorders of movement include such things as stereotypes, mannerisms, and posturing. Stereotypes are characterized by repetitive movements that occur in one part of the body and seem purposeless to the person's immediate environment. Mannerisms refer to peculiar or over exaggerated ways of performing everyday acts, while posturing involves the person holding their body in peculiar positions. Posturing is normally accompanied by catalepsy – a waxy flexibility where the person's limbs or torso can be manipulated into a position where they will remain for a period of time. More complex catatonic behaviour involves disturbances in volition. Examples of this are positivism or negativism. Positivism, or automatism as it is also known, refers to an over responsiveness or excessive

compliance to overt or implied commands. Negativism on the other hand is where the person resists all attempts to passively move them, does the reverse of whatever is asked, or behaves in a way that is in opposition to the demands of the situation.

The most complex catatonic disorders involve gross disturbances in the drives that underlie behaviour. An example of this is carrying out daily activities with a monotonous rhythmicity – every action being carried out with a photographic sameness and advertence. Catatonic stupor is another example of this and refers to a motionless and expressionless posturing. In this state the person is typically mute and displays waxy flexibility. Although unresponsive the person shows awareness of their surroundings; for example, tracking people with their eyes. Complex catatonic behaviour can also involve the opposite of this. Examples of this include over activity and outbursts of seemingly impulsive sexualized, violent, or destructive behaviour.

Formal Thought Disorders

Disorders of formal thought represent a wide range of symptoms associated with deficits in the form of thought and other cognitive functions such as attention and memory (Barlow & Durand, 2002; Egeland et al., 2003; Tamlyn et al., 1992). Formal thought disorders occur in up to 60% if people who experience psychosis (Andreasen et al., 1995; Cutting, 1997). A common example of this is derailments, or a 'loosening of associations'. These terms describe speech in which the person's ideas follow one another in a seemingly unrelated manner. It appears that the person is unable to maintain the central determining idea that gave their speech purpose and meaning (McKenna, 1994). Over-inclusion commonly occurs in these instances and refers to problems with abstract thinking and the

inability to preserve perceptual boundaries (Sims, 2003). The term 'tangentiality' also relates to this type of disturbance and refers to an inability to conform to the social rules of conversation and pick up the idiosyncratic meanings of words and phrases as they appear in the conversation.

Incoherence, paragrammatism and schizophasia are also examples of formal thought disorder and are terms that describe disturbances in the pattern of speech that result in it being largely incomprehensible. This may include the destruction of words with garbled sounds, substituting irrelevant words into sentences, and creating 'neologisms' or new words. Finally, the terms poverty of the content of speech, alogia and empty speech refer to a poverty of thoughts as expressed in words. In this case phrases may be, over abstract, repetitive, or over concrete – a tendency to focus on one concrete aspect of an object or concept at the expense of all other aspects.

Emotional Disturbances

Research has shown that emotional disturbances such as depression, anxiety, and anger are highly prevalent in people experiencing psychosis (Barnes, Curson, Liddle, & Patel, 1989; Cosoff & Hafner, 1998; Cutting, 1985; Freeman & Garety, 2003; Labbate, Young, & Arana, 1999). Anhedonia is often associated with the presence of these emotions. This term refers to an inability to experience pleasure and is characterised by a loss of interest in sex, socialising, intimate relationships, and recreational activities (Andreasen et al., 1995). Overall, research has shown that the presence of strong emotional experiences during episodes of psychosis is associated with greater psychopathology and personal distress (Birchwood & Iqbal, 1998; Tibbo, Swainson, Chue,

& LeMelledo, 2003). Goodwin, Lyons, and McNally (2002) argue that this is because high levels of emotional distress limit a persons ability to cope with the psychosis and their ability to recovery and avoid relapse. It has also been suggested that strong emotional experiences during episodes of psychosis form a psychological backdrop that influences the expression of all other psychotic symptoms (McKenna, 1994). Bleuler (1911) described this as mood colourings.

As well as experiencing overt emotional disturbances, people with psychosis may also experience problems with the expression of affect (Barlow & Durand, 2002). For example, affective flattening is one of the cardinal features of psychosis (Andreasen, 1979; Andreasen et al., 1995). Although this concept eludes easy definition it is generally defined as a diminished ability to express affect through non-verbal communication such as facial expression, tone of voice, gesture, and posture (Cutting, 1985). This may present as a lack of responsiveness to emotional topics and an appearance of indifference. People experiencing psychosis may also express emotions that are contextually inappropriate. An example of this is smiling or laughing while discussing distressing topics. Related to this, people with psychosis may also display affect that appears without conviction, or express emotions without contextual subtleties or refinements. This shallowness and coarsening of the person's emotions has been referred to as a 'blunting of affect' (Sims, 2003). Due to being relatively uncommon, 'retardation of affect' has received little attention in the recent literature. This term refers to the slowing of changes in emotional expression and the prolonged maintenance of affect that is sometimes seen in people experiencing psychosis.

Disturbances of Consciousness

As a scientific construct consciousness is very difficult to operationalise and at present no one definition of consciousness has received universal acceptance (Sims, 2003). In saying this, consciousness is often described as a representation of the brains functions that facilitates an aperceptive awareness of reality and ones existence and identity (Kaplan & Sadock, 1998; Steinberg, 1995). Specific disturbances of consciousness that commonly occur during psychosis are dissociative phenomena and experiences of oneirophrenia and perplexity (Bottero, 2001; Freyberger & Spitzer, 2002).

Dissociation is typically defined as a separation of the mental processes that are normally integrated which results in an inability to recall mental events such as memories, sensations, feelings and attitudes (Steinberg, 1995). Two components of this phenomenon that are considered predominant symptoms of psychosis are depersonalization and derealisation (Bottero, 2001). Steinberg (1995) offers succinct definitions of both of these phenomena. She describes depersonalisation as a feeling of unreality or strangeness regarding the self, and derealisation as a state during which customary environments and people feel strange or unfamiliar. Together, these phenomena have been associated with the onset of delusions of misidentification, passivity experiences, and auditory hallucinations (Haugen & Castillo, 1999; Holowka, King, Saheb, Pukall, & Brunet, 2003). Age and time disorientation are other symptom of dissociation that can occur during psychotic episodes (Cutting, 1985; Haugen & Castillo, 1999). Age disorientation is usually defined as a more than five-year discrepancy between the patients actual age and what the patient states to be their own age. Time disorientation is associated with disorientation to the current date and duration of time since the onset of psychosis. In these

instances the sufferer appears to be live in a time before the establishment of their illness (Sims, 2003).

Disturbances associated with oneirophrenia and perplexity are also experienced by people with psychosis. Oneirophrenia is defined by Cutting (1985) as a dream-like quality to personal experiences. Perplexity on the other hand is traditionally described as an uncertainty about the internal and external world which brings into question the very nature of everyday experiences (Storring, 1939).

Summary

This chapter aimed to provide a brief overview of psychosis in order to orient the reader to the present topic of inquiry. First of all, the term psychosis was introduced and modern definitions of this concept were discussed. Psychosis is generally characterized by disturbances in defining reality and is associated with a range of symptoms including delusions, perceptual disturbances, disorganized and catatonic behaviour, formal thought disorder, as well as disturbances in emotion and consciousness. Due to the wide range of symptoms that are associated with psychosis, and the tendency for these symptoms to present in a heterogeneous manner, no one definition of psychosis has received universal acceptance. The epidemiological and course related features of psychosis were also discussed. Psychosis was shown to be a relatively rare condition that typically emerges between the ages of 15 and 35 years. Males are more likely to develop psychosis than females. The incidence of psychosis in the general population has been associated with low socioeconomic status, social disadvantage, and urbanisation. The course of psychosis was shown to be heterogeneous. Approximately half of all the people with psychosis

recover over time and only a small number of people follow a course of deteriorating functioning. Finally, the variety of symptoms associated with psychosis was discussed. There is large amount of variation in the presence of these symptoms across people and one person may present with a combination of different symptoms over time.

CHAPTER THREE: THE PRE-PSYCHOTIC PERIOD

It has long been acknowledged that psychotic illness typically emerges after the culmination of a heterogeneous range of premonitory symptoms and psychopathological events (Jackson et al., 1995; Yung & Jackson, 1999; Yung & McGorry, 1996a). This 'pre-psychotic period' (PPP) has been described using a range of terminology, but is generally considered a departure from an individual's normal functioning and subjective experiences. This state is characterised by unusual cognitions, sensations, moods, and motor acts, which are transient in nature and can be difficult to describe (Beiser et al., 1993; Fuentenebro & Berrios, 1995; Loebel et al., 1992; Yung & McGorry, 1996a). This chapter will offer a general overview of the PPP, including its main clinical features. Recent research highlighting the prominence of emotional disturbances during this time will then be examined.

Incidence

Research examining the incidence of pre-psychotic phenomena has produced fairly consistent findings. An early study by Conrad (1958, cited in Yung & McGorry, 1996b) indicated that nearly all people who develop psychosis experience prodromal symptomatology. However, the majority of recent research, using modern diagnostic criteria, suggest that approximately one-quarter of all cases of psychosis are preceded by no pre-psychotic phenomena at all (an der Heiden & Haefner, 2000; Beiser et al., 1993; Gross, 1997; Tan & Ang, 2001). These studies have shown that people experiencing substance induced and reactive psychoses often present with atypical pre-psychotic

phenomena or no PPP at all (Fitzgerald et al., 2004). Apart from this, no significant differences in the incidence of pre-psychotic phenomena have been found across the various psychotic disorders (Beiser et al., 1993). It is of note that the PPP has not been widely examined in relation to cross-cultural differences and at this stage no specific cultural differences in the incidence of the PPP have been identified in the literature (Yung & McGorry, 1996b).

Duration

The duration of the PPP has been shown to be extremely variable, lasting anywhere between several months and many years (Beiser et al., 1993; Cameron, 1938; Gross, 1997; Loebel et al., 1992; McGorry, McKenzie et al., 2000; Yung & McGorry, 1996b; Yung et al., 1998). Beiser and colleagues (1993) retrospectively examined the PPP of 141 people experiencing first-episode psychosis. The duration of the PPP in this sample ranged between 2 months and 20-years. The median duration of the PPP was 52.7 weeks. Most other studies of the PPP have reported average durations between one and six years (Gross, 1997; Loebel et al., 1992). One study by Varsamis and Adamson (1971) suggested that the duration of the PPP may have a bimodal distribution, with the majority of people either experiencing prodromal symptoms for less than one year or more than four and a half years. Recent research has not supported this hypothesis though (Yung, McGorry, McFarlane, & Patton, 1995).

Course

The course of the PPP is best described as a process of changing symptomatology over time (Docherty, Van Kammen, Siris, & Marder, 1978; Haefner et al., 1992; Stanton & David, 2000; Varsamis & Adamson, 1971; Yung & Jackson, 1999; Yung & McGorry, 1996b). The PPP tends to have a gradual and insidious onset with affective symptoms such as anxiety, depression, irritability, and restlessness occurring first (Yung & Jackson, 1999). These symptoms are typically accompanied by a sense of over stimulation, and decreased adaptive functioning. More attenuated psychotic symptomatology such as overvalued ideas, perplexity, and formal thought disorder then follow. Studies have shown that the longer and more gradual the onset of pre-psychotic symptomatology the more likely it will lead to psychosis (McGorry, Krstev, & Harrigan, 2000; Stanton & David, 2000; Yung et al., 2003). None of these studies have shown significant differences between the course of the PPP and the emergence of various psychotic symptoms nor have any significant gender differences in the course of the PPP been indicated.

The transition from the PPP to florid psychosis is difficult to chart as pre-psychotic symptomatology and florid psychotic features tend to blend in with one another (Yung & McGorry, 1996b). However, the first experiences of hallucinations and delusional beliefs are often vividly recalled by the individual (Varsamis & Adamson, 1971; Yung & McGorry, 1996b). This transition tends to occur over a two to three day period (Yung & Jackson, 1999).

There is some debate as to whether the onset of psychosis is an inevitable outcome for people experiencing pre-psychotic symptomatology. This debate is represented by the difference between ‘prodromal’ and ‘pre-cursor’ conceptualisations of the PPP (McGorry

& Singh, 1995). Prodromal conceptualisations of the PPP consider it to be the first sign of the impending illness (Yung & McGorry, 1996b). A person presenting with prodromal symptoms are considered to be experiencing the earliest form of a psychotic disorder and in the absence of intervention these symptoms will inevitability lead to full-blown psychosis. In opposition to this idea, 'precursor' concepts of the PPP propose that this state represent a heightened vulnerability to becoming psychotic, but does not indefinitely lead to psychosis (Yung & McGorry, 1996b). Examples of precusor concepts of the PPP are Yung and colleagues' (2003) concept of an 'at risk mental state' and concept of 'outpost syndromes' (Huber, Gross, Schuttler, & Linz, 1980). The term 'outpost syndrome' refers to clusters of symptoms that resemble pre-psychotic phenomena, but resolve spontaneously without the onset of psychosis (Koehler & Sauer, 1984; Yung & McGorry, 1996b). Outpost syndromes have been shown to include emotional and perceptual disturbances, reduced energy levels and tolerance to normal stress, and impairments in cognitive, motor and autonomic domains (Koehler & Sauer, 1984).

While the initial PPP is generally prolonged, pre-psychotic phenomena associated with the onset of subsequent episodes of psychosis tend to have a more acute presentation and are shorter in duration (Yung & Jackson, 1999). These 'relapse prodromes' have been shown to last anywhere between two and four weeks (Birchwood et al., 1989; Herz & Melville, 1980; Tarrier, Barrowclough, & Bamrah, 1991). The shorter duration of relapse prodromes compared to the initial PPP is likely due to two factors: having an increased vulnerability to psychotic de-compensation once the first episode of psychosis has been experienced; and having a reduced threshold for manifesting psychotic symptomatology (Yung & McGorry, 1996b).

Symptomatology

Numerous studies have examined the symptomatology of the PPP (an der Heiden & Haefner, 2000; Haefner et al., 1992; Hambrecht, Hafner, & Loffler, 1994; McClellan, Breiger, McCurry, & Hlastala, 2003; Moller & Husby, 2000; Tan & Ang, 2001; Yung & McGorry, 1996b). Table 1 lists the wide range of symptoms that have been shown to occur during this time. After reviewing the literature in this area, Yung and McGorry (1996b) constructed a list of the nine most frequently reported symptoms of the PPP. These symptoms are listed in descending order of frequency in table 2.

Over time numerous attempts have been made to identify the symptoms of the PPP that are pathognomic to the onset of psychosis in order to develop early identification and treatment strategies for people at risk of developing this condition (American Psychiatric Association, 1980, 1987; Bowers & Freeman, 1966; Freedman & Chapman, 1973; Gross, 1997; Haefner et al., 1992; McGorry, McKenzie et al., 2000; Pelosi & Birchwood, 2003; Wyatt & Henter, 2001). However, due to the non-specific and transient nature of pre-psychotic symtomatology, attempts to do this have been fraught with difficulties (Yung & McGorry, 1996b). For example, the American Psychiatric Association offered an operational definition of the PPP in the Diagnostic and Statistical Manual of Mental Disorder, Third Edition (DSM-III) and its revised version (DSM-III-R), including a list of what were considered elementary symptoms. These symptoms are listed in table 3. Despite being one of the most thorough attempts to identify the core-features of the PPP, soon after being published the DSM criteria became the subject of much criticism, particularly from a group of researchers led by Henry Jackson and Patrick McGorry (Jackson et al., 1995; Jackson et al., 1994; McGorry et al., 1995).

Table 1

Symptomatology of the Pre-Psychotic Period

Symptom Category	Symptoms and Signs of the Pre-Psychotic Period
Mood related symptoms	Anxiety, irritability, anger, obsessive-compulsive phenomena, depression, guilt, suicidal ideation, self harming, elevated mood, mood swings
Volition related symptoms	Apathy, loss of drive, anhedonia, impulsivity
Physical symptoms	Fatigue, somatic complaints, changes in appetite, restlessness, sleep disturbances, weight change
Cognitive symptoms	Attention problems, concentration problems, overvalued ideas, daydreaming, thought blocking, reduced abstraction, perplexity, dissociation
Behavioural and social changes	Decreased role functioning, social withdrawal, odd behaviour, aggression, increased interpersonal sensitivity, substance abuse, change in sense of self and others, speech abnormalities, perceptual abnormalities, suspiciousness, changes in appearance, shifts in interests

Note: This table is based on a table originally constructed by Yung and McGorry (1996b), but has been adapted to include more recent research by an der Heiden and Haefner (2000), Gross (1997), McClellan, et al. (2003), Moller and Husby (2000), and Tan and Ang (2001).

Table 2

The Most Commonly Reported Symptoms of the Pre-Psychotic Period Listed in Descending Order of Frequency

Reduced concentration, attention.
Reduced drive and motivation.
Depressed mood
Sleep disturbances
Anxiety
Social withdrawal
Suspiciousness
Deterioration in role functioning
Irritability

Initially, these researchers highlighted the small number of studies that were drawn upon to identify these criteria and the mixed nature of the research samples that were used (Jackson et al., 1995; Jackson et al., 1994). The studies reviewed by the DSM planning committee included people experiencing first episode psychosis as well as those who had experienced multiple episodes of psychosis; the latter of which would have presented with a combination of residual and re-emerging prodromal symptoms. Low rates of inter-rater reliability in identifying the pre-psychotic symptoms across the studies were also evident.

In conjunction with methodological concerns, issues were also raised regarding the specificity and predictive validity of DSM criteria. Research has showed that the symptoms included in the DSM criteria are not exclusive to the PPP and their ability to predict cases of psychosis was no better than chance (McGorry, McKenzie et al., 2000). In particular, McGorry and colleagues (1995) found the DSM criteria to be highly prevalent in non-clinical samples of adolescents. The prevalence of individual symptoms in their sample ranged between 15% and 50 %. This group of researchers also noted that the DSM criteria included mostly behavioural abnormalities and lacked specific mood-related symptoms (McGorry, McKenzie et al., 2000). This is of concern as emotional disturbances have been shown to be to be better indicators of impending psychosis than behavioural symptoms (Yung & McGorry, 1996a). Studies have indicated that behavioural changes during the PPP likely emerge as a secondary reaction to affective and mood related symptoms, and are likely to be associated with changes in the persons' sense of self, others, and the world (Yung & McGorry, 1996b).

Together, the methodological and conceptual criticisms raised by Jackson, McGorry, and colleagues (Jackson et al., 1994; McGorry et al., 1995) led to the omission of any specific PPP criteria from subsequent editions of the Diagnostic and Statistical Manual of Mental Disorders (Jackson et al., 1995). The concept of a prodromal period to psychosis has been retained in the DSM-IV though. (American Psychiatric Association, 2000).

Table 3

DSM-III-R Prodromal Symptoms of Schizophrenia

1. Marked social isolation or withdrawal
2. Marked impairment in role functioning as a wage, earner student, or homemaker
3. Markedly peculiar behaviour
4. Marked impairment in personal hygiene and grooming
5. Blunted or inappropriate affect
6. Digressive, vague, over elaborate, or circumstantial speech, or poverty of speech, or poverty of content of speech
7. Odd beliefs or magical thinking, influencing behaviour and inconsistent with cultural norms
8. Unusual perceptual experiences
9. Marked lack of initiative, interests, or energy

The Prominence of Emotional Disturbances During the Pre-Psychotic Period

A growing body of research has highlighted the prominence of emotional disturbances such as anxiety, depression, and anger during the PPP (Freeman & Garety, 2003; Turnbull & Bebbington, 2001). First of all, these emotional disturbances have been shown to be highly prevalent during the PPP (an der Heiden & Haefner, 2000; Tan & Ang, 2001; Yung & McGorry, 1996b). As shown in table 2, depression is the third most

common symptom reported during the PPP and anxiety and irritability are listed in the top nine most common pre-psychotic symptoms. In addition to this, a study by an der Heiden and Hafner (2000) which examined 232 people experiencing first-episode psychosis found depression and anxiety to be two of the most prevalent pre-psychotic symptoms. These symptoms were experienced by 19% and 18% of their sample respectively. A smaller study by Tan and Ang (2001) examined 30 military personnel experiencing first episode psychosis. This study showed an even higher occurrence of emotional disturbances during the PPP. Symptoms of anxiety and depression were reported by 77% and 63% of the participants respectively. Feelings of anger and irritability were less common, but were still experienced by 53% of the research sample. The different rates of emotional disturbances found across these two studies is likely associated with the different samples sizes that were employed and the different ways in which information about pre-psychotic emotional disturbances were gathered from the participants. While an der Heiden and Hafner used psychometric tools to gather information on the PPP, Tan and Ang gathered their information using a semi-structured interview format. Overall, this empirical data corroborates phenomenological studies and experiential accounts of the PPP, which have commonly reported intense feelings of fear, depression, anger, and other negative emotional experiences during this time (Chadwick, 2001; Mclean, 2003; Parnas et al., 1998; Stanton & David, 2000).

In addition to being highly prevalent during the PPP, emotional disturbances, in particular anxiety and depression, have been closely associated with the onset of psychotic symptoms (Freeman & Garety, 2003). As previously mentioned emotional symptoms are often the first noticeable sign of change during the PPP (Yung & Jackson, 1999), and have

been shown to be better indicators of impending psychosis than behavioural symptoms (Yung & McGorry, 1996b). Anxiety has been the emotion most strongly linked to the development of psychosis (Davies, Russell, Jones, & Murray, 1998; Jones et al., 1994; Lewis, David, Malmberg, & Allebeck, 2000; Poulton et al., 2000; Tien & Eaton, 1992; Turnbull & Bebbington, 2001). Tien and Easton (1992) found that individuals diagnosed with anxiety disorders were between 2.3 and 3.6 times more likely to develop schizophrenia than those without a diagnosis. In a related line of inquiry, Jones et al (1994) found that children who went on to develop psychosis rated themselves as more socially anxious at the age of 13 and were significantly more anxious at 15 than those children who did not develop psychosis. The close link between anxiety and psychosis has also been supported by a number of case report studies (Gaylinker, Ieronimo, Perez-Acquino, Lee, & Winston, 1996; Penn, Hope, Spaulding, & Kucera, 1994; Sandberg & Siris, 1987; Slade, 1976). These studies involved the close observation of people experiencing strong anxiety who went on to develop psychosis. The study by Penn, et al (1994) in particular found that negative symptoms of psychosis were associated with behavioural indices of anxiety such as speech rate, eye contact, shaking, and restlessness. Conversely, the positive symptoms of psychosis, including delusions and hallucinations, were correlated with self-reported anxiety. This finding suggests that the emergence of either positive or negative symptoms of psychosis may be a function of an individual's awareness and/or ability to articulate feelings of anxiety.

Compared to the literature examining the link between anxiety and psychosis, research exploring the relationship between depression and psychosis is sparse. A number of longitudinal and prospective studies have found that high levels of self-reported

depression and being diagnosed with a depressive disorder are statistically significant risk factors for developing psychosis (Birchwood & Iqbal, 1998; Krabbendam et al., 2002; van Os, Jones, Sham, Bebbington, & Murray, 1998). A review of this research suggests that low self-esteem, and negative self-appraisals may be particularly important to the development of psychosis in these instances (Penn & Martin, 2001).

A fundamental assertion that has been drawn from the research highlighting the prominence of emotional disturbances during the PPP is that if emotional disturbances are prominent during the PPP then they may be intrinsically involved in the development of psychosis (Freeman & Garety, 2003; Turnbull & Bebbington, 2001). Over the past five years this assertion has received growing research attention, and recently there have been calls to examine the role of emotional changes in the development of psychosis in more detail (Birchwood, 2003; Emsley, Oosthuizen, Niehaus, & Stein, 2001; Freeman & Garety, 2003; Turnbull & Bebbington, 2001).

Summary

In conclusion, the PPP has been defined as a set of psychopathological events that precede the development of psychosis, and includes atypical cognitions, sensations, moods, conation, and motor acts. A review of the literature on the PPP shows that approximately three quarters of people who experience first episode psychosis experience pre-psychotic symptomatology. This state has been shown to last anywhere from several days to many years. The transition from pre-psychotic symptoms to florid psychosis is difficult to chart as the pre-psychotic symptomatology and florid features tend to blend in with one another. However, this transition has been estimated to occur within a two to three day period.

Research has indicated that longer and more gradual pre-psychotic deteriorations are more likely to lead to psychosis than shorter and acute episodes of prodromal symptoms. Also, the initial PPP tends to be longer than relapse prodromes. A wide range of symptoms have been shown to occur during the PPP. Researchers have had difficulty identifying the symptoms that are pathognomic to psychosis though. Recent research has highlighted the prominence of emotional disturbances, in particular anxiety and to a lesser degree depression and anger, during the PPP. This research indicates that not only are these emotions highly prevalent during the PPP, but are closely linked to the onset of psychosis. This growing body of literature has led researchers in this area to suggest that emotional disturbances may play a role in the development of psychosis.

CHAPTER FOUR: THE ROLE OF EMOTIONAL DISTURBANCES IN THE DEVELOPMENT OF PSYCHOSIS

The assertion that emotional disturbances may be intrinsically involved in the development of psychosis is by no means novel, and has been a topic of discussion for well over one hundred years (Berrios, 1996). During this time a number of different theories have been put forward that have attempted to explain this relationship (Berner, 1991; Birchwood, 2003; Freeman & Garety, 2003; Turnbull & Bebbington, 2001). These theories can be organised into three main schools of thought: dynamic, defence, and direct theories. This chapter will begin by reviewing these three schools of thought. The second half of the chapter will review a more recent theory proposed by Daniel Freeman, Philippa Garety, and their colleagues (Freeman et al., 2002; Garety et al., 2001). These researchers have developed a multifactorial model of delusions and hallucinations that posits a central role for emotional disturbances in their development.

Dynamic Theories

Dynamic theories emerged from German phenomenological literature during the first part of the twentieth century and represent some of the first attempts to understand the role of emotional disturbances in the development of psychosis (Berrios, 1994). Based on phenomenological principles, these theories focussed on the experiential nature of emotional changes during the pre-psychotic period (PPP). Over time, a variety of dynamic theories were offered (E. Bleuler, 1969; Conrad, 1958; Janzarik, 1959), all of which were underpinned by the tenet that the PPP is primarily a state of altered mood, and that this

alteration in mood is the main precipitant to the development of psychosis (Berner, 1991; Berrios, 1996). It was suggested that the non-specific affective and mood related symptoms that occur during the PPP disrupt the processing of information and linearity of logical thinking, loosening the capacity to form associations between mental constructs, and thereby producing delusions and other psychotic phenomena (Bowers, 1968; Cameron, 1938; Fuentenebro & Berrios, 1995; Gutierrez-Lobos et al., 2001).

A core article that is frequently cited in this body of literature is Conrad's monograph *Die beginnende schizophrenie* (Conrad, 1958) or The Beginning of Schizophrenia. This article has never been translated from German into English. However, thorough descriptions of Conrad's work have been offered in a number of English language articles (Berner, 1991; Fuentenebro & Berrios, 1995; Gross, 1997). Conrad described the development of psychosis in five stages. The first stage, which he labelled *trema*, refers to the PPP. Conrad proposed that *trema* represents a global change in a person's experiences and is characterised by affective symptoms such as depression and anxiety, as well as suspicion and perplexity. These changes cause everyday situations to adopt a "new and bewildering physiognomy" that is perceived to have great significance to the individual (Berner, 1991, p.88). In this state nothing is perceived as neutral and the individual comes to question themselves as well as the outside world. Objects and situations are not accepted at face value, but are recognised in accordance with the overriding affective experience. For example, objects may be perceived as threatening if the underlying emotion is anxiety or they may be perceived as exalted if the underlying emotion is positive. Over time, these changes in mood and perception lead to the realisation that "everything has a special meaning" (Berner, 1991, p.89). If this process

continues uninterrupted the person will develop a 'Ptolomaic' view of the world where everything becomes self-referential. This phase continues on until ordered thinking is lost and delusions, along with other psychotic symptoms, develop.

As a whole, dynamic interpretations of the relationship between emotional disturbances and the development of psychosis led to widespread interest in this area during the first part of the twentieth century (Berner, 1991; Berrios, 1996). However, more recently, researchers have found these theories difficult to validate and since the middle of the century there has been little interest in examining them further (Fuentenebro & Berrios, 1995; Turnbull & Bebbington, 2001). The psychological pathways that were suggested by these theories have never been directly tested using modern methods of inquiry, and therefore remain suppositional (Berrios, 1996).

Defence Theories

During the first part of the nineteenth century, attempts were made to understand the role of emotional disturbances in the development of psychosis using psychodynamic principles (Arieti, 1974; Freud, 1961; Jaspers, 1963; Schneider, 1959). These theories proposed that psychotic symptoms act as protective mechanisms against strong negative emotional experiences. Accordingly, they have been collectively labelled 'defence' theories (Freeman & Garety, 2003). By offering an alternative interpretation of reality, psychotic phenomena are believed to prevent distressing emotions from entering into an individual's consciousness (Arieti, 1974; Lapidus & Schmolling, 1975). The central antecedent to psychosis is believed to be life stressors that involve either a symbolic or actual threat to the ego. These stressful events are likely to evoke strong emotional

reactions that overwhelm the ego with negative ideas and beliefs about the self. In response this, there is an overwhelming desire to escape this situation. The onset of psychosis represents a regression from adequate levels of ego functioning where reality based psychological defences become unstable (Arieti, 1974; Roberts, 1992). Florid psychotic symptoms such as delusions and hallucinations are said to occur when abstract ideas associated with intense emotions are experienced as concrete events. However, the escape from reality is never completely successful. External reality cannot be totally abandoned and the psychosis becomes a compromise, with the person experiencing partial detachment from the outside world. It is assumed that individuals are predisposed to psychotic regression if they have low self-esteem and poorly developed ego functions (Roberts, 1992).

In general, defence theories have not been subjected to extensive experimental testing. However, the concept of "psychosis as an escape from a painful reality" is supported by a number of research findings (Lapidus & Schmolling, 1975, p.689). Studies have shown a counterpoint between the content of pre-psychotic emotional disturbances and the compensatory themes of the subsequent symptoms (Freeman & Garety, 2003). For example, Zigler and Glick (1988) view paranoia as a form of camouflaged depression, while other researchers have identified a relationship between perceived threats to the self and the development of persecutory delusions (Bentall & Young, 1996; Colby, Faught, & Parkinson, 1979). Support for defence theories has also come from research showing that the intensity of emotional disturbances during the PPP tends to ameliorate after the development of florid psychotic features (Birchwood, 2003; Lewis et al., 2000; Roberts,

1991; Turnbull & Bebbington, 2001). This would be expected if indeed psychotic symptoms protected people from strong negative emotions.

Direct Theories

During the middle of the twentieth century, with advances in the measurement of physiological activity, researchers began to examine the role of strong emotional experiences and the inability to modulate excessive levels of arousal in the development of psychosis (Claridge, 1967; Lapidus & Schmolling, 1975; McReynolds, 1960; Mednick, 1958; Walker & Diforio, 1997; West, 1962). This group of theories became known as the 'direct' school of thought. The underlining premise of direct theories was that prolonged levels of high arousal, often associated with intense emotional distress, leads to cognitive disturbances such as a loosening of associations, dissociative experiences, and deficits in attention (Freeman & Garety, 2003; Lapidus & Schmolling, 1975). These disturbances, in combination with physical exhaustion and restlessness, impair an individual's ability to effectively manage and evaluate sensory input, leading to the development of psychotic phenomena. In particular, delusions were considered to function as an explanation for the confusion and uncertainty that the individual experiences during this time. It was generally assumed that individuals are predisposed to psychosis by possessing over responsive autonomic reactions to stressors, an overly slow recovery rate from such reactions, or both (Mednick, 1966; Walker & Diforio, 1997).

As can be seen from this literature there are similarities between direct theories of psychosis and the dynamic theories mentioned earlier in this chapter. In particular, both schools of thought suggest that emotional disturbances cause disruptions in cognitive

functioning, which in turn lead to psychosis. Based on a review of the literature in this area it appears that the more modern direct theories were, in part, informed by the earlier phenomenological research in this area, taking the original ideas that the dynamic theories were based on and investigating them further using quantitative methods of inquiry (Lapidus & Schmolling, 1975). For example, researchers following the direct school of thought made attempts to identify the specific psychological processes linking high levels of prolonged arousal to the onset of psychosis. McReynolds (1960) suggested that prolonged affective states were caused by a backlog of information that needed to be processed and assimilated into mental schemas. It was suggested that psychotic symptoms develop as a way of stabilising and reducing the amount of unprocessed information. An alternative explanation was developed by Lapidus and Schmolling (1975). These researchers hypothesised that more than one arousal system was involved in the development of psychosis. These researchers proposed that the arousal of the central nervous system was dependent on two interacting mechanisms, the tonic arousal system which is responsible for regulating baseline arousal, and the arousal modulating system which has two inter-related functions. The first is to maintain homeostasis in the central nervous system through the suppression of tonic arousal and the second is to filter sensory input to the central nervous system, guarding it from over stimulation. It is hypothesised that psychosis develops as a result of a breakdown between these two systems. If the arousal modulating system was weakened the tonic arousal system would become disinhibited, resulting in abnormally high levels of arousal. This in turn would lead to difficulties with monitoring incoming information and attention would be less selective. Conversely, if the modulating system was strengthened arousal would be lowered and

attention would be narrowed, leading the person to overly focus on irrelevant information. These two kinds of imbalances are presumed to account for the development of psychotic symptoms (Lapidus & Schmolling, 1975).

Reviews of direct theories of psychosis have generally described them as complex and conflicting and the research on which they are based as inconclusive (Lapidus & Schmolling, 1975; Turnbull & Bebbington, 2001). Also, the studies on which these theories have been developed have mainly taken place in laboratory settings. This has led some researchers to question the generalisability of these research findings to real-life settings (Turnbull & Bebbington, 2001).

Freeman and Garety's Multifactorial Model of Psychosis

Recently, Daniel Freeman, Philippa Garety, and their colleagues (Freeman & Garety, 2002; Garety et al., 2001) formulated a multifactorial model of delusions and hallucinations which suggests that emotional disturbances play a central role in their development. Their theory primarily adheres to the direct school of thought regarding the role of emotional disturbances in the development of psychosis, suggesting that high levels of emotional distress in combination with cognitive disturbances lead to psychosis. Emotional disturbances are also suggested to underlie the content of the emergent psychotic symptoms as well.

Freeman, Garety, and their colleagues' (Freeman & Garety, 2002; Garety et al., 2001) theory has come after a period of relative disinterest in the role of emotional disturbances in the development of psychosis (Garety & Freeman, 1999). During the latter half of the twentieth century, with the ascendancy of the cognitive paradigm to this area of

study, interest in an etiological relationship between emotional experiences and psychosis waned (Turnbull & Bebbington, 2001). The majority of research conducted during this time was devoted to identifying the perceptual and cognitive disturbances associated with psychosis (Garety & Freeman, 1999). Emotional disturbances were often interpreted as either secondary outcomes to these underlying cognitive disturbances or expected reactions to experiencing psychotic phenomena (Birchwood, 2003; Chapman & Chapman, 1988). The main cognitive variables examined during this time included abnormal perceptual processing (Maher, 1988), theory of mind deficits – an inability to represent the beliefs, thoughts, and intentions of other people (Frith, 1987; Frith & Corcoran, 1996), probabilistic reasoning biases (Garety & Hemsley, 1987; Garety, Hemsley, & Wessely, 1991), and biases in a person's attributional style – the way in which people ascribe causes to events (Bentall et al., 1994; Kinderman & Bentall, 1996). The model proposed by Freeman, Garety, and their colleagues (Freeman & Garety, 2002; Garety et al., 2001) seems to have led to renewed interest in this area by offering researchers a multifactorial explanation of delusions and hallucinations that combines the aforementioned cognitive research with earlier emotion-based theories, as well as neurobiological and social levels of explanation.

The model proposed by Freeman, Garety, and colleagues (Freeman & Garety, 2002; Garety et al., 2001) is based on the stress-diathesis paradigm and identifies two proximal routes to the development of delusions and hallucinations. The first proceeds through both cognitive and affective changes and explains the development of co-occurring delusions and hallucinations, as well as the development of hallucinations on their own.

The second proceeds through emotional disturbances alone and exclusively accounts for the emergence of delusions.

The first route begins when a person predisposed to developing psychosis experiences a stressful life event that triggers a disruption in their cognitive processing, leading to the development of anomalous conscious experiences (Garety & Hemsley, 1994). These anomalous experiences may include heightened perception, actions experienced as unintended, racing thoughts, thought broadcasting, thoughts experienced as voices, and a loosening of associations. Two types of cognitive disruptions have been associated with the emergence of these experiences. First of all, they may result from disruptions in a person's ability to self-monitor their intentions and actions (Frith & Corcoran, 1996). Disruptions in this area would decrease in an individual's ability to recognise their own intentions to act, causing their perceptions, thoughts, and behaviour to appear foreign. Alternatively, these anomalous experiences may arise from "a weakening of the influence of stored memories of regularities of previous input on current perception" (Hemsley, 1993, p. 633). Hemsley (1993) proposes that a non-psychotic individual's moment-to-moment sensory input is consistently being synthesised with previously learnt stimulus-response associations. This results in sensory experiences that are continuous and cohesive. A breakdown in this system would lead to sensory input that cannot be integrated with previously learnt stimulus-response associations. This would result in sensory information appearing ambiguous and unstructured, and therefore anomalous. Hemsley (1998) notes that despite the differences between these two types of cognitive disruptions both represent a break down of 'willed intention' – the ability to formulate a

contextually meaningful understanding of stimulus-response relationships and to select specific responses to achieve higher order goals.

Alongside these disruptions in cognitive processing and the onset of anomalous experiences the person will also experiences emotional changes during this time. These emotional changes not only occur in response to the triggering event, but also in response to the anomalous experiences. Over time, these emotional changes feed back into the processing of the anomalous experiences, influencing their content. Garety, et al. (2001) suggest that the interaction between the disrupted cognitive processes, anomalous experiences, and emotional changes represents the first stage in the development of psychosis and are best described as pre-psychotic symptoms.

In time, due to the puzzling nature of the anomalous experiences and the intense emotions associated with them, attempts will be made to understand and find an explanation for these changes (Maher, 1988). The employment of biased conscious appraisal processes during this time is said to be crucial factor in the development of delusions and hallucinations (Garety et al., 2001). Studies have shown that in states of high emotion and confusion, such as the PPP, people tend to adopt biased conscious appraisal processes such as jumping to conclusions, externalising attributional biases, and theory of mind deficits (Garety et al., 1991). These biases have been shown to contribute to the judgment that inner experiences, such as anomalous experiences, have an external cause and are personally significant to the person (Garety & Freeman, 1999). A lack of belief flexibility has been identified as another biased cognitive process that may be related to the onset of psychosis, but has received less research attention (Garety & Hemsley, 1994). This is defined as a dichotomous thinking style associated with an intolerance of

ambiguity and a belief confirmation bias – a tendency to notice what confirms one's beliefs and to ignore or undervalue the relevance of contradictory evidence (Garety & Hemsley, 1994; Maher, 1974). Freeman et al. (2002) suggest that the onset of psychosis represents the point where a person appraises their experiences as externally caused and personally significant to them. The person's experiences will then likely be identified by others as hallucinations and delusions. It is suggested that in instances where a person experiences hallucinations without delusions, they have been able to reject the hypothesis of externality and adopt more protective self-correcting attributions for the anomalous experiences. For example, the person may hear voices and conclude that ones mind is playing tricks on them (Garety et al., 2001; Peters, Day, McKenna, & Orbach, 1999).

The second route to psychosis proposed by these researchers accounts for the development of delusions on their own and proceeds solely through affective changes (Garety et al., 2001). In these instances the triggering event does not result in disruptions in the person's information processing ability and there are no anomalous experiences. However, the triggering event does cause emotional disturbances and biased cognitive appraisal processes. In these instances delusional beliefs emerge as a way of explaining the person's experiences, but no hallucinations develop. As the presence of delusional activity by itself is less common than other manifestations of psychosis, these researchers propose that this route is less common than the first.

In relation to the content of the psychotic symptoms that develop, Freeman, Garety, and colleagues have highlighted the thematic link between various pre-cursory affective states and the emergence of various psychotic phenomena (Freeman & Garety, 2002; Freeman & Garety, 2003; Garety et al., 2001). In particular, these researchers have

suggested a link between persecutory phenomena and pre-psychotic experiences of anxiety, both of which are associated with a sense of vulnerability and the anticipation of danger (Freeman et al., 2002). It is suggested that depression and low self-esteem may also play a part in persecutory phenomena by increasing the person's sense of social exclusion and isolation, thereby encouraging a sense of being targeted by others (Freeman et al., 2002). Studies in this area have also found a positive correlation between feelings of depression and psychotic experiences associated with powerlessness, inferiority, and punishment (Birchwood, Meaden, Trower, Gilbert, & Plaistow, 2000; Freeman & Garety, 2002; Trower & Chadwick, 1995). Trower and Chadwick (1995) have labelled this phenomena 'bad-me paranoia'. Further support for a link between emotional disturbances and the content of psychotic symptoms has come from factor analytic studies which have identified an emotional component to psychosis alongside the original positive-negative symptom dichotomy. This emotional component has been shown to co-vary more closely with the positive group of symptoms than the negative group (Stefais, Hanssen, & Smirnis, 2002).

Freeman, Garety, and colleagues (Freeman et al., 2002; Garety et al., 2001) emphasise the importance of these psychological routes to delusions and hallucinations occurring against a social and developmental backdrop that is conducive to the development of psychosis. In particular, these researchers highlight the literature showing a high incidence of victimisation and trauma histories in people experiencing psychosis (Bebbington et al., 2004; Muesser et al., 1998; Neria, Bromet, Sievers, Lavelle, & Fochtmann, 2002). Studies have shown that inner city rearing (Mortensen, Pedersen, Westergaard, & Wohlfahrt, 1999), exposure to an alien culture (Bhugra, Leff, Mallet, &

Mahy, 1999), social adversity and deprivation (Bhugra et al., 1997), childhood loss (Agid et al., 1999), bereavement (Morrison & Petersen, 2003), physical and sexual abuse (Birchwood et al., 2000; Read et al., 2003), as well as emotional neglect, unwanted pregnancy, and dysfunctional parental attachment (Greenfield, Stakowski, & Tohen, 1994) have all been shown to be risk factors to developing psychosis. Some studies have even begun to tease out which adverse environmental factors predate specific types of psychotic symptoms. Recently, links have been found between early childhood abuse and the development of hallucinations (Read et al., 2003), formal thought disorder and caregivers who communicate incoherently (Wahlberg, 1997), and paranoid phenomena and experiences of victimisation and discrimination (Bhugra et al., 1999).

It is hypothesised that negative life experiences such as these contribute to the development of psychosis in two ways. First of all, these events have been associated with the development of negative cognitive schemata regarding the self, others and the world; for example, a sense of victimisation or powerlessness (Garety et al., 2001). Such schema, and the negative affect associated with them, have been shown to influence the way information is processed under stressful conditions, encouraging the use of biased conscious appraisal processes and externalising attributions (Bentall et al., 1994; Birchwood, 2003; Bowins & Shugar, 1998; Fowler, Garety, & Kuipers, 1998). A recent study by Morrison and Petersen (2003) found that trauma-generated meta-cognitive beliefs such as self-absorption and imaginative involvement, in conjunction with dissociative variables, explained 40% of the variance in having a predisposition to hallucinations or not. Secondly, pre-existing negative schemata are hypothesised to influence the content of the psychotic symptoms that develop. For example, Garety, et al (2001) report a link between

cognitive schemata associated with intrusive life events and the development of persecutory phenomena. In addition to these psychological variables, researchers have suggested that social isolation during stressful times contributes to the development of psychotic symptoms by limiting a person's access to alternative, more normalising explanations (White, Bebbington, Pearson, Johnson, & Ellis, 2000).

Garety et al. (2001) acknowledge that at present their model is highly speculative, but plausible given the current corpus of knowledge on the development of delusions and hallucinations. These researchers suggest that more research is required to further their theory. In particular, there is a need to examine the conceptual relationships subsumed in their model. Also, their model was formulated based on research that has primarily focused on the role of anxiety and depression in the development of persecutory phenomena and there is a need to examine the relevance of their model to a range of other emotional experiences and psychotic phenomena (Freeman et al., 2002). Possible areas of inquiry include examining the relationship between anger and perceptions of being treated unfairly in the formation of persecutory phenomena and the role of elation in the development of grandiose phenomena (Freeman & Garety, 2003).

After reviewing the corpus of literature examining the role of emotional disturbances in the development of psychosis Freeman and Garety (2003) conclude that the development of psychosis most likely involves a range of common emotional changes in combination with a number of psychological processes unique to the onset of psychosis. However, a review of the literature shows that few attempts have been made to examine in detail emotional disturbances during the PPP and at this stage the exact nature of the emotional changes that precede the onset of psychosis is unclear (Freeman & Garety,

2003). It has been suggested that having a more detailed understanding of these pre-psychotic emotional changes will lead advance this area of study (Freeman & Garety, 2003; Freeman et al., 2002; Garety & Freeman, 1999; Jackson et al., 1994).

Summary

This chapter reviewed the corpus of literature suggesting that emotional disturbances play a causative role in the development of psychosis. Early theories in this area can be organised into three main schools of thought: dynamic, defence, and direct theories. Dynamic theories suggest that the PPP primarily consists of non-specific affective and mood related symptoms. Over time, these abnormal emotional experiences disrupt the processing of information and the linearity of logical thinking, loosening the capacity to form associations, and thereby produce delusions and other psychotic symptoms. Defence theories evolved from the psychodynamic paradigm and suggest that psychotic symptoms act as a protective mechanism against strong negative emotions. By offering an alternative interpretation of reality, psychotic phenomena are believed to prevent distressing emotions from entering into an individual's consciousness. Finally, direct theories propose that the prolonged levels of high arousal associated with emotional distress leads to cognitive disturbances such as a loosening of associations, dissociative experiences, and deficits in attention. These disturbances, in combination with physical exhaustion and restlessness, impair an individual’s ability to effectively manage sensory input and eventually lead to the development of hallucinations and delusions. Together these theories offer a variety of different accounts of how emotional disturbances may lead

to psychosis. However, none of these accounts have been fully supported by the research in this area.

More recently, Daniel Freeman, Philippa Garety, and their colleagues (Freeman et al., 2002; Garety et al., 2001) have offered a multifactorial model of delusions and hallucinations that combines recent cognitive models of psychosis with earlier emotion-based theories, as well as neurobiological and social levels of explanation. Their theory primarily adheres to the direct school of thought, suggesting that high emotional distress in combination with cognitive disturbances lead to the development of hallucinations and delusions. Their theory also suggests that pre-psychotic emotional disturbances underlie the content of these psychotic symptoms. Although Freeman and Garety's model represents a significant advance in this area, at present it is highly speculative and more research is required to further their theory. Based on the current research in this area it is hypothesised that the development of psychosis most likely involves a range of common emotional changes in combination with a number of psychological processes unique to the onset of psychosis. However, few attempts have been made to examine in detail emotional disturbances during the PPP and at this stage the exact nature of the emotional changes that precede the onset of psychosis is unclear. It has been suggested that having a more detailed understanding of these pre-psychotic emotional changes will advance this area of study.

CHAPTER FIVE: DELUSIONAL ATMOSPHERE

The research presented thus far has suggested that the exact processes by which emotional disturbances lead to psychosis remains unclear and in order to advance research in this area there is need to have a more detailed understanding of these experiences. By far the most enduring concept that may be relevant to this area of study is delusional atmosphere (*Wahnstimmung*), or delusional mood as it is also known (Berrios, 1994; Fuentenebro & Berrios, 1995). Delusional atmosphere offers an account of the emotional and perceptual changes that precede the development of delusions (Berner, 1991; Mellor, 1991). Although the concept of delusional atmosphere has been used in German psychiatric literature for over 120 years, Jaspers (1913/1963) has been credited for bring this construct to the fore by offering an account of delusions, with delusional atmosphere being a central feature (Berner, 1991; Mellor, 1991). Since the work of Jaspers, the concept of delusional atmosphere has been widely commented on in the literature. However, it has not been the subject of extensive empirical testing and few attempts have been made to formally define it. The aim of the present chapter is to offer a conceptual summary of delusional atmosphere in order to facilitate the examination of this construct in the present study. In order to do this, the literature on delusional atmosphere will be reviewed in detail, beginning with the work of Jaspers' (1913/1963).

Jaspers' Account of Delusional Atmosphere

Jaspers (1913/1963) defined delusional atmosphere as a range of sensations, feelings, moods, and awarenesses that have a vague, near ineffable content, alongside a sense of objective validity and meaning – "Something is going on; do tell me what's going

on" (p. 98). Jaspers described this experience as everything in the environment being enveloped in a "subtle, pervasive, and strangely uncertain light" (Jaspers, 1963, p. 98). In this state, the environment offers a world of new meaning and everything appears portentous. Jaspers (1913/1963) believed this state is characterised by powerful affective experiences including a distrustful, uncomfortable apprehension, a sense of suspicion, and an uncanny tension.

Central to Jaspers' (1913/1963) account of delusional atmosphere is the distinction between primary and secondary delusions. According to Jaspers, primary delusions or 'delusions proper' are incipient pathological phenomena which to observers are psychologically irreducible and primarily "incomprehensible" (Jaspers, 1963, p. 98). Roberts (1992) interpreted Jaspers' use of this phrase to mean that they do not appear to have psychologically understandable antecedents. He also suggests that, given the wide spread acceptance at the time of Jaspers' work that organic disease processes caused psychopathology, he is likely to have assumed that primary delusion were a result of a hypothetical disease agent. In comparison to primary delusions, Jaspers considered secondary delusions, or delusion-like ideas, to be abnormal beliefs and ideas that are understandable consequences of disordered mental functions such as abnormal affect or false perception. Jaspers believed secondary delusions were not specific to psychosis and could be understood as a function of the person's life experiences, culture, and emotional state. Jaspers' (1913/1963) concept of delusional atmosphere was central to his account of primary delusions. He described delusional atmosphere, with its vagueness of content, as an intolerable state during which people suffer terribly. Jaspers proposed that in response to this mental anguish there is a drive to understand what is being experienced. He

believed that this drive to find meaning in these experiences, and the need to bind these free floating emotional states, is what underlies the formation of primary delusions. Central to this model of primary delusions is the notion of incorrigibility. Jaspers believed that the development of primary delusions is required by the individual's psyche and as such prevents them from extinguishing the delusion.

Jaspers (1913/1963) accounted for the development of primary delusions in the context of delusional atmosphere using three interrelated concepts: delusional perception, delusional intuition, and delusional memory. Delusional perception is characterised by experiences where abnormal self-referential significance becomes attached to innocuous environmental events. Research has shown that delusional perception is most easily identified during the first episode of psychosis as it represents a new experience of meaning to the person (Mellor, 1991). Jaspers believed delusional perception occurs via a two-stage process. First of all, there is a percept which the person recognises and acknowledges the meaning it has to others. Secondly, the person recognises that the percept has a special meaning which is private to them, but is unable to be objectively validated. This second stage is dependent on 'delusional intuition' and heralds the beginning of a delusional belief.

Delusion intuition, has received a variety of different labels, including 'autochthonous delusions' (Mellor, 1991), a 'groundless reference' (Gruhle, 1915, cited in Mellor, 1991), as well as 'delusional notion' and 'delusional awareness' (Sims, 2003). This concept has been described as a judgment or belief that is not derived from any perception, but enters suddenly into consciousness and is held with absolute certainty. The following extract was used by Mellor (1991, p. 105) to illustrate the process of delusional intuition:

> He saw a red pick-up truck parked on a bridge under which he had to go. He knew that it was an ordinary vehicle and did not attribute any special intent to the driver, nor significance to its location. Nevertheless, he knew almost instantly that it was a very important sign that was meant for him and him alone. This red pick-up truck parked in this particular location meant that he was John the Baptist and that he had to starve himself for 40 days and 40 nights.

In general there is a paucity of research examining the concept of delusional intuition. This is because this concept is generally considered to be no different to normal thought patterns and therefore of limited diagnostic value (Schneider, 1959; Sims, 2003).

After reviewing the research on both delusional perception and delusional intuition Mellor (1991) identified four avenues by which a percept can be related to a delusion. First of all, 'delusion-like ideas evoked by a percept' occurs when a delusion develops suddenly as a result of perception. Secondly, 'delusion-like ideas induced by a percept' is similar to the first avenue, but differs in that the delusion develops only after considerable rumination over the meaning of the percept. Thirdly, 'delusional notion linked to a percept' is the process by which a delusion is triggered by a percept and the person believes the relationship between the percept and the delusion is obvious to everyone. Finally, 'delusion reinforced by a percept' describes situations where the delusion exists before experiencing the percept. In this situation the perception has a meaning that derives understandably from the delusion, as well as strengthening it.

Delusional memories, or retrospective delusions, are memories recalled by the person that are delusional in nature. Jaspers (1913/1963) only briefly mentions this phenomenon, and there is a paucity of research examining it. In part this is because it is difficult to distinguish between pure delusional memories – memories of a false nature – and the attachment of a delusional meaning to a recalled percept which Jaspers considered to be delusional perception (Sims, 2003). The difficulty in distinguishing between these two phenomena has meant that at present there is no universally accepted demarcation between these constructs.

Subsequent Accounts of Delusional Atmosphere

Despite having relatively little empirical backing or being the subject of direct inquiry, Jaspers' (1913/1963) theory of delusions profoundly influenced the way delusional atmosphere was defined and studied during the 20th century (Roberts, 1992). During this time delusional atmosphere has been further described by many writers using a range of terminology and many anecdotal accounts of this construct have been offered (Berner, 1991; Berrios, 1996; Fuentenebro & Berrios, 1995; Lange, 1942; Mauz, 1931; Mellor, 1991; Schneider, 1959; Sims, 2003; Wetzel, 1922; Wiggins, Schwartz, & Northoff, 1997) A central theme in this literature is the acceptance that despite its vintage delusional atmosphere remains a core concept to understanding the emotional and perceptual changes that precede delusional beliefs (Berner, 1991; Mellor, 1991)

Fuentenebro and Berrios (1995) reviewed the literature on delusional atmosphere produced during the first part of the 20th century, including the work of, Conrad (1958), Mauz (1931), Schneider (1959), Storring (1939), and Wetzel (1922). Wetzel described

delusional atmosphere as a special affective state that heralds an 'end of the world experience' and an associated transformation of the self. Similar to Wetzel's description, Conrad described this state as a sense of an unknown, yet impending disaster. More recently, Schneider described this concept as an odd sense that something significant yet undefined is about to occur. Alongside these accounts, both Mauz and Storring emphasise the affective nature of this state. Mauz suggests that in response to the vague changes that occur during this time and the person's inability to explain them, feelings of insufficiency develop. Storring's comments concur with Mauz's account, but he also highlights the centrality of anxiety and perplexity to this state. He wrote that implicit to delusional atmosphere is an uncertainty about the internal and external world which brings into question the very nature of everyday experiences.

A review of the more recent literature on delusional atmosphere shows that descriptions of this concept have changed very little over time. Mellor (1991) described delusional atmosphere as a distressing state during which "objects portend but do not reveal, important new personal meanings" (p. 104). Likewise, Sims (2003) described this state as the world being subtly altered in an indefinable way so that everything around the person seems "sinister, portentous, and peculiar" (p. 125). Sass (1994) conceptualised the subtle changes in perception and experience during delusional atmosphere as "uncanny particularity" (p. 97). What is perceived during this time may appear completely normal while at the same time feel definitively special and meaningful. These meanings are said to lie just beyond ones reach. McKenna (1994) elaborates on this point, suggesting that in this state the person knows they are personally involved in these changes, but can not tell how and therefore becomes extremely perplexed and apprehensive. Using a different

method of inquiry, Wiggins, Schwartz, and Northoff (1990) offered an interpretation of delusional atmosphere from a phenomenological perspective. These researchers described this state as a fundamental and radical "ontological change" (p. 27) in the person's reality that causes them to become uncertain of the essentiality of things. The person experiences a "weakening of the constitution between the self and the world" (p. 27) and feels that reality is fundamentally different, bewildering, or strange. Further, the person is convinced that this change has some important significance to them. Finally, a small body of literature has acknowledged the similarities between definitions of delusional atmosphere and certain dissociative phenomenon (Christodoulou, 1991). Christodoulou (1991) suggests that delusional atmosphere resembles the dissociative symptom of de-realisation in combination with anxiety related symptoms.

Experiential Accounts of Delusional Atmosphere

Alongside academic and clinical descriptions of delusional atmosphere numerous experiential accounts of the PPP have been offered which describe experiences consistent with the concept of delusional atmosphere (Anonymous, 1983; Brundage, 1983; Chadwick, 2001; Cutting & Dunne, 1989; Fortnier & Steel, 1988; Mclean, 2003; Moller & Husby, 2000; Parnas et al., 1998; Payne, 1992; Vonnegut, 1975). Excerpts from experiential accounts of the PPP that illustrate this construct are listed in table 4. A review of these accounts shows that delusional atmosphere is no doubt an unpleasant experience, marked by uncertainty, anxiety, depression, and perplexity. These accounts also describe the fragmentation of meaning and a search for new concepts to describe the world. These

changes have been shown to often manifest as a developing interest and preoccupation with philosophical and supernatural ideas (Parnas, 2000).

Table 4

Experiential Accounts of Delusional Atmosphere During the Pre-Psychotic Period

"My delusion followed a period characterised by a feeling of meaning"	(Chadwick, 1993, p. 243)
"My perceptions…started to solidify into something foreboding"	(Mclean, 2003, p. 15)
"It was an indefinable strangeness"	(Cutting & Dunn, 1986, p. 349)
"I had a sense that everything was more vivid and more important….The wait for something bad to happen was excruciating"	(Brundage, 1983, p. 584)
"What was wrong was such a strange elusive thing"	(Vonnegut, 1975, p. 81)
"The experience of strange disengagement isolation and distance"	(Parnas et al., 1998, p. 102)
"pervasively changed...unreal...something totally wrong"	(Moller & Husby, 2000, p. 223)
"I first began to be anxious and fearful"	(Fortnier & Steel, 1988, p. 702)

A Conceptual Summary of Delusional Atmosphere

The concept of delusional atmosphere has been a topic of discussion throughout the twentieth century and may be a useful way of conceptualising the emotional changes that occur during the PPP, prior to the onset of delusions. However, there is paucity of research examining this construct in detail and few attempts have been made to formally define it (Sims, 2003). So the concept of delusional atmosphere can be examined in the present study a conceptual summary of this construct was formulated by the present researcher and his supervisor, Andrew Moskowitz. This is presented in table 5. This summary suggests that delusional atmosphere is made up of three core components: a spatial component; a temporal component, and an affective component. These components of delusional atmosphere were identified following a review of the literature presented in this chapter. Beginning with the work of Jaspers (1913/1963), each description of delusional atmosphere was analysed in detail and its core features were identified. As similar accounts of delusional atmosphere emerged from the literature they were grouped together under broader categories. Once all the literature had been reviewed, each category was given a conceptual label and defined in a way that captured its thematic essence.

It is important to note that the conceptual summary of delusional atmosphere offered in table 5 has not been widely disseminated and reviewed by researchers and clinicians working in this area. Also, it is difficult to ascertain the relative primacy of these components of delusional atmosphere over the course of the PPP. Despite these issues, having a conceptual summary of delusional atmosphere does allow at least an initial examination of this construct to take place in the present study. Initial feedback on this summary of delusional atmosphere from a group of researchers and clinicians working in

the area of psychosis in New Zealand suggests that this definition contains the essential features of delusional atmosphere and has favourable face validity (Watts, 2005).

Table 5

A Conceptual Summary of Delusional Atmosphere

Component	Definition
Spatial component	The environment seems somehow different, subtly altered – enveloped in a "pervasive and strangely uncertain light" (Jaspers, 1913/1963, p. 98). Everything appears imbued with possible new meanings. Derealisation – feelings that ones customary environment or friends and family are strange, unfamiliar, or unreal – is a feature of this.
Affective component	The person experiences an 'uncanny' and uncomfortable feeling, characterised by anxiety, perplexity, confusion, and uncertainty as to what is different in the environment and what this change(s) portends.
Temporal component	A sense of apprehension and an almost unbearable foreboding tension that something terrible (or just important) is happening or is about to happen, but the person doesn't know what it is.

Summary

Delusional atmosphere offers an account of the emotional and perceptual changes that precede the development of delusional thought processes. In this chapter Jaspers' (1913/1963) seminal account of delusional atmosphere was discussed alongside more recent definitions of this phenomenon. Experiential accounts of the PPP that were illustrative of this state were also presented. Although delusional atmosphere has been widely commented on in the literature there has been a paucity of research examining this construct in detail and few attempts have been made to formally define it. In order to facilitate the examination of delusional atmosphere in the present study a conceptual summary of this construct was offered.

CHAPTER SIX: THE PRESENT STUDY

This chapter will begin by reviewing the aims of the present study and restating the research questions. Secondly, the research design will be outlined. This chapter will conclude by outlining interpretative phenomenological analysis (IPA) as the chosen methodology.

Research Aims

The present study has an exploratory purpose and two interrelated aims. The primary aim of this study is to explore in-depth the experiential nature of the emotional changes that occur during the pre-psychotic period (PPP). The literature presented thus far has shown that emotional disturbances such as anxiety, depression, and anger commonly occur during the PPP (Jackson et al., 1995; Parnas et al., 1998; Stanton & David, 2000; Tan & Ang, 2001; Yung & McGorry, 1996a, 1996b). As well as being highly prevalent during this time, anxiety and to a lesser degree depression have been shown to be risk factors for developing psychosis (Jones et al., 1994; Krabbendam et al., 2002; Poulton et al., 2000; Turnbull & Bebbington, 2001). Over time, a variety of theories have been put forward to explain the role of emotional disturbances in the development of psychosis (Berner, 1991; Fuentenebro & Berrios, 1995; Garety et al., 2001). However, none of these theories have been fully supported and few attempts have been made to examine in detail emotional experiences during the PPP (Freeman & Garety, 2003). Also, there is some controversy over how the PPP is best conceptualised. Some researchers believe that this state is best described as a 'prodromal' phenomenon where a person presenting with pre-

psychotic symptoms is considered to be experiencing the earliest form of a psychotic disorder (McGorry & Singh, 1995). Other researchers consider the PPP to be a 'precursor' state, representing a heightened vulnerability to becoming psychotic, but not indefinitely leading to psychosis (Yung et al., 2003). At this stage it can be concluded that the exact nature of the PPP and the emotional changes that precede the onset of psychosis is unclear.

It has been suggested that having a more detailed understanding of the emotional changes that precede psychosis will advance this area of study (Freeman & Garety, 2003; Freeman et al., 2002; Garety & Freeman, 1999; Jackson et al., 1994). In particular, Jackson, McGorry, and McKenzie (1994) suggest conducting a study involving a descriptive investigation of emotional changes during the PPP in a naturalistic setting. It would also be useful to examine a wide variety of emotional experiences during this time. Prior research in this area has focussed almost exclusively on examining the role of negative emotions such as anxiety during the PPP and little research has examined the role of other negative emotions or even positive emotions during this time. Conducting such a study would also add to the growing body of literature in New Zealand in this area and would be one of the first New Zealand based studies to examine the PPP in detail. In response to this literature the main question posed by the present study is: what is the experiential nature of the emotional changes that occur during the PPP?

The secondary aim of the present study is to examine whether there are similarities between experiential accounts of the emotional changes that occur during the PPP and the concept of delusional atmosphere. For many years the concept of delusional atmosphere has been used to conceptualise the emotional and perceptual changes that precede the development of delusions. However, there has been a paucity of research examining this

construct in detail and few attempts have been made to formally define it. At this stage it is unclear whether it is a useful way of conceptualising the emotional changes that occur during the PPP, prior to the onset of delusions. Following a review of the literature in this area three core components of this phenomenon were identified: a spatial component; a temporal component, and an affective component (table 5, pg 60). These core components will be used to address the following question: what features of delusional atmosphere are consistent with experiential accounts of the emotional changes that occur during the PPP?

Research Design

In line with the majority of previous research examining the PPP, the present study will use a retrospective design to address the research questions. This method involves gathering information about the PPP from people who have recently developed psychosis (Birchwood, 1996). Data collection usually involves the administration of a structured or semi-structured interview schedule which asks the research participants to recall their experiences during the PPP (Haefner et al., 1992; Klosterkotter, Ebel, Schultze-Lutter, & Steinmeyer, 1996; Yung & McGorry, 1996b). The reliance on retrospective methods of data collection to this area of study is related to the inherent difficulties in identifying instances of the PPP and tracking its often vague and transient symptoms (Beiser et al., 1993; Fuentenebro & Berrios, 1995). The insidious nature of the PPP makes its onset hard to pinpoint. Often changes in the person's mental state and behaviour are identified as pre-psychotic only after the development of florid psychotic features (Yung & McGorry, 1996a). By using a retrospective research design these difficulties can be avoided.

Using a retrospective research design to examine the PPP does have one main limitation. It requires people who are experiencing psychosis to recall detailed information about a time that is usually very distressing and confusing for them. To overcome this problem in the present study corroborating data regarding observable changes in the participants' behaviour during the PPP will be gathered from a close acquaintance of the participant, such as a family member or a friend, who had regular contact with them during this time. This technique has been shown to produce more detailed information than what can be gathered from participant interviews alone (American Psychiatric Association, 1987, 1994; Beiser et al., 1993; Birchwood, 1996; Yung & Jackson, 1999).

In recent times attempts have been made to use prospective research designs to examine the PPP. This method involves identifying and monitoring a group of individuals at risk of developing psychosis over an extended period of time (Haefner et al., 1992; McGorry, McKenzie et al., 2000; Walker, 1991). Follow-up assessment sessions range from one to five years with the main outcome measure being the onset of psychosis. As well as avoiding the difficulties associated with retrospective techniques, this method has the added advantage of allowing researchers to watch pre-psychotic changes as they happen. However, due to the relatively small rate of participants who go on to develop psychosis this research design requires large sample sizes, long observation periods, and large amounts of resources (McGorry & Edwards, 1998). Due to the limited resources allocated to the present study and timeframe for completion the use of a prospective design was beyond the scope of this study.

Interpretive Phenomenological Analysis

The data from the present study will be analysed using interpretive phenomenological analysis (IPA). IPA was developed by Smith (1996; 2004; Smith, & Osborn, 2003) to explore in-depth how people describe and make sense of their personal and social experiences. The basic unit of analysis in IPA research is the personal meaning a person ascribes to their experiences. IPA has traditionally been used within the area of health psychology, but its use has recently been extended to the study of psychotic phenomena (Knight, Wykes, & Hayward, 2003; Osborne & Coyle, 2002; Rhodes & Jakes, 2000). The decision to use IPA in the present study was made for a number of reasons. First of all, as a topic of inquiry, pre-psychotic experiences do not exist independent of human consciousness and cannot be understood without the interpretation of those who have experienced it. It is therefore important to use a method of analysis that focuses on the meanings the participants assign to their experiences. Secondly, IPA can accommodate multiple perspectives on the same topic and the inherent complexity across different people's experiences. IPA has been specifically designed to provide rich and detailed information about personal experiences from unstructured, naturalistic data. Thirdly, using IPA there is no need for strong verbal abilities or for the person's experiences to be told in a coherent sequence. Also, no deception or manipulation of the participant's behaviour is required. These are considered advantages given the sensitive nature of the research population.

Three theoretical schools of thought underpin IPA. These are phenomenology, social cognition, and symbolic interactionism. Phenomenology emerged at the beginning of the twentieth century, and involves examining in detail an individual's personal

experiences (Giorgi & Giorgi, 2003). Phenomenologists argue that nothing can be understood without passing through someone's consciousness. They believe that to understand the 'psychological essence' of human phenomena requires the analysis of first hand experiences (Giorgi, 1997). Attempts are made to describe human experiences as they appear in the world. These experiences are considered meaningful in their own right and there is no attempt to produce an objective statement of these experiences or compare them to an 'objective reality' (Radovic & Radovic, 2003).

Social-cognitive approaches to human behaviour posit that personal experiences are made up of cognitive, affective, physical, and behaviour components. It is assumed that there exists a complex relationship between these aspects of experience and the physical environment. This approach is epistemologically underpinned by the idea of mentalism – the assumption that a person's physical, mental and emotional state can be interpreted from verbal and physical behaviour, as can the meanings they ascribe to their experiences.

Finally, IPA is underpinned by the ideas of symbolic interactionism. This school of thought proposes that an individual's sense of self and the meanings they ascribe to situations is created through social interaction and is informed by action and the consequences of action (Denzin, 1992). Research is considered as a dynamic social process with the researcher being an active agent in this activity. Although researchers attempt to access the participants' experiences this cannot be done directly or completely. The researcher's own perspective on the topic of inquiry and the social meaning systems that allow the researcher and participants to communicate undoubtedly influence the data that is collected and how it is interpreted (Henwood & Pidgeon, 1992). The intricacies of this relationship have been conceptualised as a 'double hermeneutic loop' – as the

participants try to make sense of their own experiences, the researcher tries to make sense of their sense making (Smith & Osborn, 2003).

Data Collection

IPA begins by sampling data that is representative of the phenomenon under investigation. The size of the sample depends on the topic of inquiry and aims of the study. Given the detailed nature of the data analysis associated with IPA, the size of the research samples used in such studies have ranged between 5 and 15 (Knight et al., 2003; Osborne & Coyle, 2002; Rhodes & Jakes, 2000). Due to the small sample sizes used it is important that the sampling techniques employed lead to the selection of a closely defined group of participants for whom the research questions are relevant.

Consonant with its theoretical underpinnings, IPA employs qualitative methods of data collection. Data is usually gathered using structured or semi-structured interviews and comes in the form of an individual's narrative of their experiences. Interviews are normally taped and transcribed verbatim. This facilitates a detailed analysis of the participant's experiences. Transcriptions are normally made at a semantic level; recording the prosodic features of talk is not required.

Data Analysis

IPA involves the conceptual analysis of the data into themes and the relevant topics they encompass. Rather than a set methodological procedure, IPA is best described as a style of research that involves a number of step-wise methodological guidelines (Smith & Osborn, 2003). Initially, the transcripts are analysed one at a time. The analysis of each

transcript is a three-stage process. The first stage involves the researcher reading the interview transcript and making preliminary notes on the person's narrative. These notes may include comments on the participant's use of language, summaries of what the participant has said, or preliminary interpretations of their experiences. Further into the transcript, contradictions between the person's accounts may be noted, along with the researcher's initially thematic impressions of the person's narrative. The second stage involves the researcher reviewing the transcript again and attempting to 'parse' the text into themes, using the initial comments they made as a guide. During this process the researcher focuses on inductive 'empathetic hermeneutics' where attempts are made to understand the participant's point of view (Smith & Osborn, 2003). When similar themes emerge later in the transcript the same theme title is used to mark the text. It is important that the themes are labelled in a way that captures the 'essential quality' of what has been found in the text. Using the language in the text to title the theme is a common way of assuring this. At other times, more technical language may be more appropriate. Once the whole transcript has been worked through in this manner all of the themes are listed together. During the final stage of the transcripts analysis the researcher attempts to theoretically order the themes and make connections between them. Clusters of themes are given a name that captures the essence of the themes that account for it. The outcome of this process is a table of themes that are grouped into superordinate and subordinate categories. During this process themes may be dropped from the analysis. Themes are excluded if they either do not fit well within the structure of the other themes or are not very richly evidenced within the transcript.

Subsequent transcripts are analysed using the same process. During the analysis of later transcripts similarities and differences between each of the participants' narratives will be noted. It is reasonable to use themes that have emerged from previous transcripts to orientate subsequent analysis. However, in doing this it is important to respect divergences in the data and the need to develop new themes as required. Only after all the transcripts have been analysed does the researcher conduct a cross-case analysis of the themes that have emerged from each transcript (Smith, 2004). This process involves comparing the themes from each of the transcripts with one another for convergence and divergence, and then constructing a final table of super-ordinate themes and the lower level themes they encompass. This process mirrors the process that was used to consolidate the themes in the individual transcripts. Once again, themes may be dropped from the analysis if they either do not fit well within the structure of the other themes or are not very richly evidenced by the research data.

Criteria for Guiding and Evaluating Studies Using Interpretative Phenomenological Analysis

Over time, many different standards of practice and validity checks have been applied to qualitative research (Altheide & Johnson, 1994; Giorgi, 1988; Guba & Lincoln, 1989; Henwood & Pidgeon, 1992; Miles & Huberman, 1984; Mishler, 1990; Packer & Addison, 1989; Rennie, 1995; Stiles, 1993). Recently, Yardley (2000) and Elliott, Fischer and Rennie (1999) brought some conformity to this area by offering general guidelines for assessing qualitative research. Yardley (2000) offers three broad principles, while Elliot et al. (1999) offers seven more specific criteria. Their criteria show much overlap, and have

been widely accepted by researchers using IPA (Smith, 2003). Both Yardley (2000) and Elliot et al. (1999) emphasise the importance of not prescriptively adopting these criteria, and that different studies need to address these issues in different ways.

Yardley's (2000) first principle, 'sensitivity to context', refers to the degree to which researchers acknowledge the environment in which the research was conducted. This may include acknowledging the previous literature in the area, the socio-cultural milieu in which the study was conducted, and the nature of the relationship between the researcher and the participants. Related to this, Elliot et al. (1999) suggests 'situating the sample' by offering the reader a basic demographic description of the research participants. This offers readers an understanding of what populations the research findings may be relevant to. Related to this principle, Elliot et al. (1999) also suggest that before the results are presented the researcher should acknowledge their own personal expectations and assumptions they brought to the topic of inquiry and how these may have influenced the process of data analysis.

Yardley's (2000) second principle is broken down into four related concepts, 'commitment', 'rigour', 'transparency' and 'coherence'. 'Commitment' describes the degree to which the researcher has engaged in the research process. This may include knowledge of the literature in the field, previous experience performing similar qualitative research, and acknowledging the time spent collecting and analysing the data. 'Rigour' refers to the thoroughness of the study and the completeness of the analysis undertaken. This includes the selection of a relevant sample, and following generally accepted research procedures relevant to the chosen methodology. 'Transparency' and 'coherence' refer to the researcher offering explicit description of the research procedures and data collection tools

and presenting this information in a logical format. Elliot et al. (1999) also acknowledge the need for coherence. They emphasise the importance of developing a structured and clear narrative of the research process. It is especially important to be sensitive to what degree the research results reflect the raw data. Research findings should be presented alongside examples of raw data so readers can appraise the fit between the two (Henwood & Pidgeon, 1992; Smith, 1996). This process also allows readers to hypothesise possible alternative interpretations of the data.

Yardley's (2000) third principle, 'impact and importance', refers to whether the research findings offer anything useful to the topic of inquiry. One way of assessing this is to consider the degree to which the study has achieved the goals it set out to achieve (Elliott et al., 1999). Reporting the 'transferability' of the research findings is also important. Transferability is closely related to the quantitative ideal of generalisability and refers to the applicability of the research finding to situations that are similar to the context in which the research was conducted (Guba & Lincoln, 1989). Elliot et al. (1999) also refers to how well the research resonates with the readers and offers them further lines of inquiry.

Finally, researchers have emphasised the importance of performing credibility checks on the research findings (Elliott et al., 1999; Henwood & Pidgeon, 1992; Smith, 2003). This is often done by means of peer review throughout the research process. Another way of doing this is assessing how well the research findings are received by the participants. This can show how well the research findings fit the reality of the phenomenon (Stiles, 1993). However, this practice has been criticised on the grounds that the participants may not be aware of the reasons behind their actions, and that their

understanding of their behaviour will likely change over time. Questioning the findings may also be limited by the perception of authority attributed to the researcher by the participants (Henwood & Pidgeon, 1992). Allowing an external audit of the research procedure is possibly the most thorough way of examining a studies credibility (Smith, 2003). All aspects of the research process should be documented so that this can occur. Relevant documentation may include sampling decisions, descriptions of the context in which the data was analysed, definitions of concepts and categories, and the researchers thought processes underlying the conceptualisation of the data.

Summary

The primary aim of the present study is to explore in-depth the experiential nature of the emotional changes that occur during the PPP. A secondary aim of this study is to identify the features of delusional atmosphere that are consistent with experiential accounts of the PPP, prior to the development of delusions. The present study will use a retrospective research design to address these aims. This type of research design involves gathering information about the PPP from people who have recently developed psychosis. Due to the difficulties the participants may have recalling detailed information about the PPP, corroborating data regarding observable changes in their behaviour during this time will also be gathered from a close acquaintance of theirs who had regular contact with them during the PPP. IPA was outlined as the chosen research methodology. This method of data analysis is designed to explore in-depth how people describe and make sense of their personal and social experiences and is underpinned by the theoretical schools of phenomenology, social cognition, and symbolic interactionism. Rather than a set

methodological procedure, IPA is best described as a style of research that involves the conceptual analysis of the research data into themes and the relevant topics they encompass. Finally the various criteria for guiding and evaluating studies using IPA were outlined.

CHAPTER SEVEN: METHOD

Participants

The sample consisted of 12 volunteer males recruited through the Early Psychosis Intervention Centre, Waitemata District Health Board, Auckland, New Zealand (EPI). The EPI centre provides specialised treatment for people aged between 16 and 25, experiencing first-episode psychosis in a defined geographical catchment area in Auckland. The mean age of the clients at the EPI centre at the time of the study was 21.7 years. The all male sample was coincidental as both males and females were invited to take part in the study. This outcome is likely associated with the predominance of male clients in this agency. The male to female ratio of the clients at the EPI centre at the time of data collection was estimated by the team leader to be 3:1. The fact that the primary researcher was male may have also influenced this outcome, but the relative influence of this factor is difficult to quantify.

The age of the participants ranged between 17 and 24 years ($M = 20.21$, $SD = 2.23$ years). Seven participants were of New Zealand European decent, four identified themselves as Maori, and one participant was of Asian decent. Four of the participants had left school before receiving any formal qualification, six had received a secondary level qualification, while two had gained a tertiary degree or diploma. At the time of the study six of the participants were unemployed, four were employed full-time, and two were full-time students. None of the participants were married and only one had fathered a child.

All of the participants had a current diagnosis of a psychotic disorder with delusional thought content as defined by the DSM-IV-TR (American Psychiatric

Association, 2000). Seven had a diagnosis of schizophrenia, three were diagnosed with schizophreniform disorder, and two were diagnosed with psychotic disorder not otherwise specified. The duration of the participants' psychosis ranged between seven months and six years (M = 2.43, SD = 1.79 years). The duration of the pre-psychotic period (PPP), as reported by the participants ranged between 1 and 24 months (M = 8.58, SD = 6.99 months). At the time of the study, all of the men were being prescribed antipsychotic medication and five were receiving a form of psychotherapy for psychosis. Of the five men who were receiving psychotherapy, two were being treated with cognitive-behavioural therapy while the other three were receiving unstructured counselling.

Data Collection Techniques

Current Circumstances Questionnaire

This brief self-report questionnaire was developed by the researcher to gather demographic and family history information from the research participants (Appendix A).

Semi-Structured Interview With the Participant

A semi-structured interview schedule was used to gather detailed information about the participants' emotional experiences during the PPP (Appendix B). The interview schedule aimed to establish when the participants first noticed a change in themselves and to track the nature and sequence of these changes up until the development of florid psychotic features. Specific questions related to the concept of delusional atmosphere were

also included in this schedule. These questions were based on the conceptual summary of delusional atmosphere offered in chapter five.

This interview schedule was developed by the researcher in accordance with guidelines for studies using interpretative phenomenological analysis (Smith & Osborn, 2003) and after reviewing a variety of interview schedules used to collect information on the PPP in clinical populations (Birchwood, 1996; Haefner et al., 1992; Klosterkotter et al., 1996; Yung & McGorry, 1996b). Funnelling techniques were used to introduce areas of inquiry not already addressed by the participant and to elicit more detailed information. This technique involves beginning the interview with general open-ended question that introduce the topic of inquiry and placing more specific questions at the end of the interview (Merriam, 2002). This technique is less likely to produce responses biases in the direction of preparatory hypotheses or a specific area of interest (Smith & Osborn, 2003). The interview schedule was reviewed by a senior consultant clinical psychologist for appropriate content and safety and pilot interviews were conducted on five non-clinical controls to refine its structure and content.

Semi-Structured Interview With an Acquaintance of the Participants

A semi-structured interview schedule was used to gather detailed information about observable changes in the participants' behaviour during the PPP from a family member or friend who had close contact with them during the PPP (Appendix C). The interview schedule followed a similar semi-structured format to that of the participant interviews and was developed in the same fashion. Specific questions related to the concept of delusional

atmosphere were not included in this schedule though. Pilot interviews were conducted with five non-clinical controls to refine the structure and content of this interview schedule.

Clinical Information Questionnaire

The clinical information questionnaire was developed by the researcher to gather information from the participants' case manger or clinical psychologist around their date of entry into EPI, current diagnosis, nature of their psychotic symptoms, and treatment details (Appendix D). The content of this questionnaire was reviewed by a senior consultant clinical psychologist for appropriate content.

Procedure

The research data was gathered between August 2004 and September 2005. Prior to commencing data collection the researcher consulted with, and received research approval form, the relevant stakeholders. This included the staff and cultural consultants at the EPI centre, the Waitemata District Health Board, the regional ethics committee, and the local Maori research advisory committee and other Iwi representatives. Regular feedback was given to these parties during the data collection process and a summary of the findings was offered to them at the end of the study.

Potential participants were identified by their case manager or clinical psychologist at EPI and given a participant information sheet (Appendix E). Exclusion criteria included: any documented neurological illness or mental retardation; a diagnosis of substance induced or reactive psychosis; non-English language speaking; and the presence of ideation associated with harm to self or others. If the client expressed interest in taking part in the research a meeting was arranged with the researcher. Before data collection

commenced the research checked that each participant had a full understanding of what their participation in the study involved, any questions they had about the research were answered, and their rights as a research participant were explained. Written consent from the participant was then obtained (Appendix F).

Data from each participant was collected during face to face meetings with the researcher. The duration of these meetings ranged between 60 and 90 minutes. Data collection began with the participants completing the current circumstances questionnaire. The administration of the semi-structured interview then followed. This portion of the interview was audiotaped. The interviews ended with a debriefing where the participants could ask questions and make additional comments. During this time the participants were asked to nominate a family member or friend from whom additional information could be gathered regarding the changes they experienced during the PPP. They were asked to identify someone who: they thought would be willing to participate in the research; knew them well before the onset of the PPP; and had regular contact with them during this time. After meeting with each participant a clinical information questionnaire was completed by their case manager or clinical psychologist at EPI. Within two weeks of each interview taking place the audio taped portion of the meeting was transcribed verbatim and a copy of the transcript was sent to the participants for review. Follow-up interviews were offered to all of the participants so they could discuss with the researcher any changes or additional comments they wanted to make to their interview transcript. None of the participants requested a follow-up interview.

Following each of the participants' interviews, their nominated acquaintance was sent a participant information sheet (Appendix G), asking them to contact the researcher if

they are interested in participating in the study. In two cases no suitable acquaintance could be identified by the participants and in one case the nominated acquaintance refused to take part in the research. In total, data was gathered from nine of the participants' acquaintances. Seven of the acquaintances were parents of the participants. Of the two remaining acquaintances, one was a sibling and the other was a girlfriend. All of the acquaintances reported having daily contact with the participants during the PPP. The acquaintances' written consent was obtained before data was collected (Appendix H).

The collection of data from the acquaintances followed the same format to that used with the participants, but excluded the administration of the current circumstances questionnaire. The duration of these interviews ranged between 60 and 90 minutes. Once again, within two weeks of each interview taking place the audio taped portion of the meeting was transcribed verbatim and a copy of the transcript was sent to the acquaintances for review. Follow-up interviews were offered to all of the acquaintances so they could discuss with the researcher any changes or additional comments they wanted to make to their interview transcript. None of the acquaintances requested a follow-up interview.

At the end of the study a summary of the research findings was disseminated to all of the participants and their acquaintances and their feedback on the findings was invited. Following this the researcher received positive feedback about the findings of the study from two of the participants.

Data Analysis

Once collected, the data corpus was inputted into N6 (Qualitative Software and Research International, 2003), a computer program for qualitative data analysis, and analysed using interpretive phenomenological analysis as outlined by Smith and Osborn (2003). Given that the data from the participants and the acquaintances represented two different phenomenological perspectives on the PPP they were treated as two different data sets and were analysed separately.

Research Assumptions

With all qualitative research it is important to identify the personal values, expectations, and assumptions the researcher brings to the study that may influence the process of data analysis (Elliott et al., 1999; Merriam, 2002). Before the analysis of the present data took place the researcher wrote the following research memo, identifying the personal values and experiences that he felt he brought to the study:

> Due to my own personal experience working with people experiencing psychosis I have an interest in conducting research that helps people and their families who have been affected by this condition. Also as a researcher I have an interest in listening to people's life stories and how, through their life experiences, they come to make sense of themselves, the world and others. Previous to the present study I conducted a qualitative study of the male experience of depression. It was these interests and experiences that drew me to this area of study and to choose a qualitative method of inquiry. It is also important to note that my

previous clinical training and experience in this area has been based on the cognitive-behavioural paradigm (Chadwick, Birchwood, & Trower, 1996). This theoretical perspective, and its emphasis on the relationship between thoughts, feelings, behaviour, and physiological responses, is likely to influence the way I analyse and interpret the data corpus.

The influence of these experiences and my own knowledge of the literature on the present study are represented by the following two assumptions: the majority of the participants in the study would have experienced some form of pre-psychotic symptomatology before the onset of their psychosis; and emotional experiences are likely to be a feature of the participants' pre-psychotic period (P. Watts, personal communication, May, 2004)

In order to manage the impact of these values and assumptions on the way the data was analysed, regular face to face meetings occurred between the researcher and his supervisor during the research process. During these meetings critical reviews of the themes that were being drawn from the data were performed and the ways in which the researcher's previous experiences may be impacting on the analysis was discussed. Joint coding of selected sections of the interview transcripts was also employed to ensure that the emerging themes showed a level of transparency and coherence.

CHAPTER EIGHT: RESULTS

This section will present the major interpretative themes that emerged from the data corpus related to emotional experiences during the pre-psychotic period (PPP). The themes that were drawn from the participants' data set will be presented first, followed by the themes drawn from their acquaintances' data set. Direct quotes have been included to illustrate these themes and are referenced by the speaker and the appropriate line of the interview transcript. To facilitate a clear presentation format the themes are presented as discrete. However, in the data sets they were often spoken about as being interconnected.

Participant Themes

Seven interpretative themes were drawn from the participants' interviews related to their emotional experiences during the PPP. They are: (i) changes in the emotional self, (ii) unpleasant emotional changes, (iii) pleasant emotional changes, (iv) the stressful world, (v) experiencing the world differently, (vi) being confused, and (vii) becoming progressively worse. These themes and the sub-ordinate categories they are made up of are presented in figure 1.

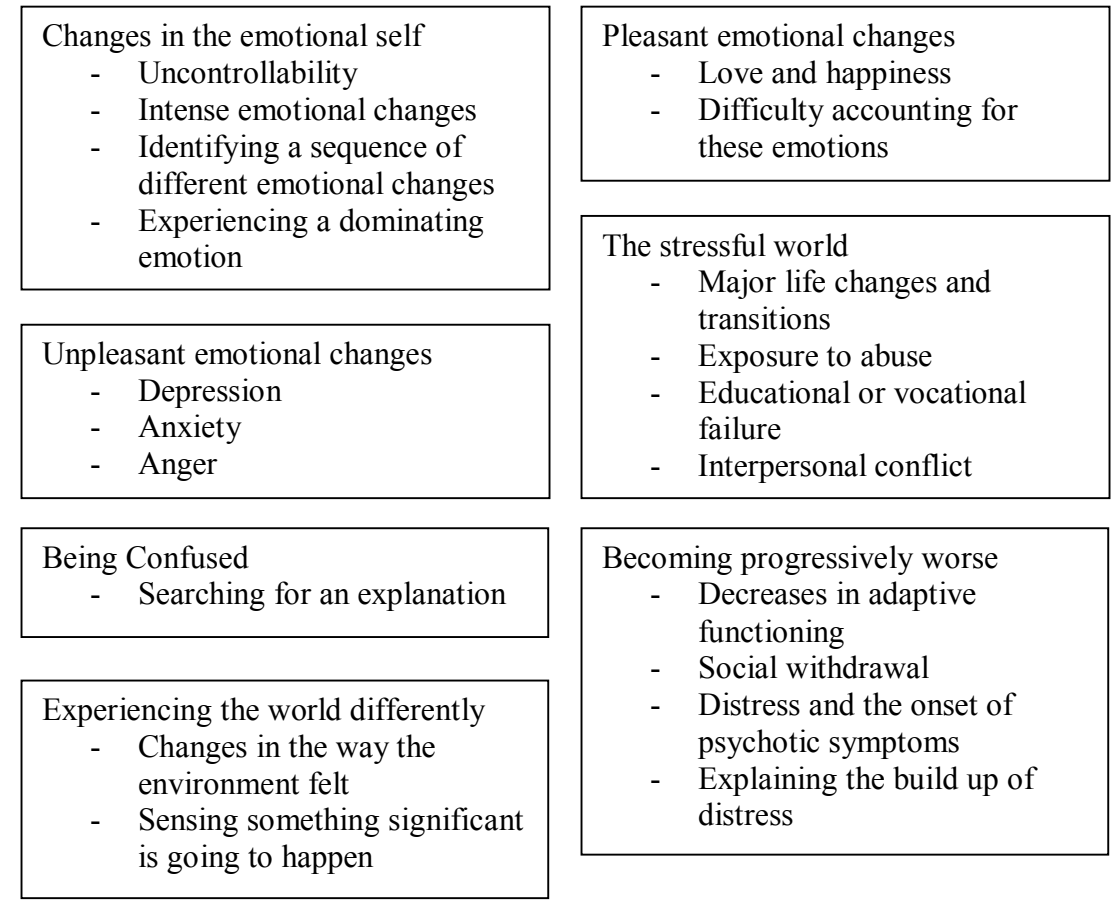
Changes in the Emotional Self

A central theme that was drawn from the participants' data set was 'changes in the emotional self'. This theme represents the global change in the participants' emotional state that they experienced during the PPP. The nature of this change in subjective state was described by one participant as a "major change in attitude" (PS, 286). Other

participants reported “an overall change in how I felt” (AL, 180), “my mood...everything was going differently” (MP, 253), and “it was like having all new feelings” (HC, 218).

Figure 1

The Interpretative Themes Drawn From the Participants' Accounts of the Pre-Psychotic Period



When describing these changes in their emotional selves the participants often commented on the uncontrollability of their emotions during this time. This is illustrated by comments such as “I couldn't control my moods” (PS, 5), “I operated all on the emotions” (SD, 57), and "I felt all out of control" (SC, 63). The following excerpt illustrates the lack of control one participant had over his moods: "There was no balance. I would be down one day, up the next, angry, what ever. It was like I had no control over it" (PS, 67). Another feature of this change in the emotional self was its intensity. Terms such as "intense" (HJ, 109), "extreme" (VD, 809), and "real bad” (SD, 171) were often used to describe these changes. When SD was asked to rate the intensity of his emotional experiences out of 10 he reported it to be “at least nine and a half” (172). Given the intense nature of these emotional changes, they were often reported as one of the first signs change and heralded the onset of the PPP. For example,

> I think it started when I woke up in the morning. I had a job interview that day. I woke up and I couldn't be stuffed doing it. My mood had all changed. That was it, that’s when it sort of started. (PS, 289)

Reflecting back on the changes in emotion the participants experienced during the PPP, they all identified a sequence of specific moods and affective states they experienced during this time. These included depression, anger, anxiety, guilt, and feelings of love and happiness. The nature and sequence of emotions reported by each participant during the PPP is displayed in table 6. As can be seen from this table the sequence of emotions experienced

Table 6

Pre-Psychotic Emotional Experiences Reported by Each Participant

	Depression	Anger	Anxiety	Guilt	Love/Happiness
Participant					
MP	1*	2			
HJ	1*	2			
SD	1*	2			
PS	1*	2			2
MC	3		2*		1
VD	2		1*		
AL	1*		2		
LD			1*		
HC	3		2		1*
AC	1*				
WK	3			2	1*
SC	1*		2		

Note: The numbers in this table indicate the order in which the participants experienced each emotion.
*The dominating emotion identified by each participant.

by each participant varied. The majority of participant (MP, HJ, SD, PS, AL, SC) initially experienced depression during the PPP followed by either anxiety or anger. For one of these participants (PS) feelings of love and happiness also followed his feelings of depression. Three other participants (MC, HC, WK) first experienced feelings of love and happiness which were then followed by negative emotional changes, including depression, anxiety, and guilt. One other participant (VD) reported initial having feelings of anxiety, but over time became more depressed. The remaining two participants (AC, LD) described only one emotional change during the PPP. They described ongoing experiences of depression and anxiety.

Although a sequence of emotional changes were often described by the participants during the PPP, they were all able to identify one emotion that dominated their experiences during this time. The dominating emotion identified by each participant is indicated in table 6. This emotion was identified by the participants as either the one they experienced the most during this time, had the most influence over their behaviour, or both. For example, one participant described depression being the "biggest" (SD, 202) emotion he experienced during the PPP. Other participants commented that "anxiety was with me all the way through" (VD. 312) and "mostly I felt good during that time…happy" (WK, 361). Overall, negative emotional experiences dominated the participants' experiences of the PPP rather than positive emotions. Depression was the most commonly reported dominating emotion, followed by anxiety and then feelings of love and happiness. It is of note that for 11 of the 12 participants the first emotion they experienced during the PPP was also the emotion they identified as dominating their experiences during this time.

In conclusion, the theme "changes in the emotional self" emerged as a core feature of the participants' experience of the PPP and describes the general nature of the emotional changes that occurred during this time. The next two themes, 'unpleasant emotional changes' and 'pleasant emotional changes', are closely related to this first theme. They represent the ways in which the participants' described the different emotions they experienced during the PPP.

Unpleasant Emotional Changes

Evident on all of the participants' accounts of the PPP were references to unpleasant emotional changes. These included depression, anxiety, anger, and guilt.

Depression

Depression was described by 11 of the participants and was the most common emotion experienced during the PPP. One participant commented "I always felt depressed" (HJ, 52). Another reported "just having a feeling of depression (SD, 170). Colloquialisms were also used to describe feelings of depression. These included "feeling shit, really shit…like down and out" and "get me out of this fucking hole that I am in" (AL, 119, 190). Comments such as "I had lost my glow" (PS, 117) and "my spirit had all gone" (AL, 217) were also used to describe this emotion.

Anhedonia emerged as a central feature of the participants' experiences of depression. One participant reported that "the depression sort of settled in and it went hand in hand with a can't be arsed doing stuff attitude" (PS, 312). Another participant described the link between the depression and anhedonia as follows:

> Just waking up every morning having my breakfast and lounging around. That gradually built up to being bored, and from bored, to being useless, to getting down. Then it affected the band. Like I couldn't be arsed practicing and stuff like that. When we got a gig we wouldn't play as well as we wanted to. I didn't really want to adopt that attitude but it was the easiest way of dealing with things. (SD, 200)

Suicidal ideation was another feature of the participants' depression. Suicidal ideation was reported by five of the participants (MP, HJ, MC, AL, HC). Three of these participants (HC, AL,JH) attempted suicide during the PPP. Suicidal ideation tended to be associated with intense feelings of depression and often occurred during the latter part of the PPP after prolonged episodes of depression. One participant gave the following account of the events the preceded one of his suicide attempts:

> When I first decided to attempt suicide I was lying in bed and I couldn't get to sleep. I was so down. It just came to me as this big urge like I am going to hang myself. I am going to do it. (HC, 127)

The participants' accounts of depression were closely associated with low self esteem and perceptions of not being good enough. Comments such as "not really liking myself" (MP, 112) and "feeling like a loser" (AL, 127) were commonly reported by the participants. For example, one participant described strong feelings of depression after not

playing rugby as well as he wanted and feeling as though he had disappointed his family: “after training and after the games I always felt like I had let my dad and them down. Not playing right always making mistakes… I thought I was letting my family down” (HJ, 51). Another participant described feeling as though he was not capable of making friends and finding a job. He said “I didn't have the confidence my friends had. I looked at my mates in the flat and I thought these guys are way cooler than me. They have more confidence” (SP, 203). Also related to the participants' experiences of depression were feelings of loneliness and social isolation. One participant commented “well basically it was a feeling of loneliness. I couldn't just ignore it. Because I didn't have many friends I just started thinking heaps and then my thoughts just went a little bit crazy” (SD, 46). A similar experience was reported by another participant. While travelling overseas he described “just feeling alone. I was really home sick. I rang my parents every couple of days, and I would have this massive pain of feeling home sick and missing them” (PS, 99). Finally, one participant described feelings of guilt and perceptions of wrongdoing associated with his depression (WK). He reported "making mistakes in the past" and "eventually seeing the bigger picture and realising they were wrong. I felt guilty for it" (WK, 103-107). Perceived mistakes by this participant were "not following the teachings of my religion and sinning" (WK, 102). His account of “sinning” included substance use and sexually promiscuous behaviour.

Anxiety

Feelings of anxiety were experienced by approximately half of the participants during the PPP. Anxiety was described as “freaking out” (LD, 128) and feelings of “fear”

(MP, 201) and “major anxiety” (VD, 309). Physiological reactions associated with the anxiety included trembling, restlessness, physical tension, adrenalin rushes, and sleep difficulties. Indicators of increased psychological arousal and hypervigilence were also common. For example, one participant said “I was more observant…I’d be looking around all the time” (VD, 413). Another reported "being more aware of things around me” (MP, 257).

When the participants were asked to comment on the meaning of their anxiety they often described a vague sense of being in danger. Some of the participants felt as though they were being followed or watched, people were talking behind their back, or that they were being trapped. The participants generally found it difficult to provide detailed information about these beliefs or evidence that would have objectively validated them. The following excerpts illustrate this point:

> People seemed to be following me and talking about me….Like when I was on a bus one time I was waiting at this one stop and there was this guy there, waiting there, and I went to another stop and he came off behind me. I started to worry about what it meant. (VD, 426)

> “I didn’t know exactly why they were doing it. It just seemed as though they were, like it was happening…. Small signs and little things that people would do. At work they would talk behind my back and stuff. It all added up at the time. (LD, 211)

Various forms of behaviours were employed by the participants to manage their anxiety. These behaviours were often described by the participants as attempts to "protect" (SC, 83) themselves from the danger and included breaking off friendships, moving residence, affixing extra locks to doors, carrying weapons wherever they went, and avoiding public places.

As the feelings of anxiety persisted two of the participants (VD, HC) reported an increasing sense of paranoia and the emergence of persecutory beliefs. These participants described becoming more and more suspiciousness of those around them and making more direct interpretations hostility from others. For example, over a six-month period VD came to believe that people wanted to hurt him: "to me it seemed like people were trying to get me and stuff. It started with the Mongrel Mob gang and then strangers and then my friends. Over time I thought it was everyone" (VD, 420). HC described a similar escalation in anxiety and sense of paranoia. He described developing a "strange sense that people were trying to capture me" (HC, 61). He said that initially he was unsure as to why this was the case, but over the course of the PPP he came to realise that parents were the ones that were trying to capture him. He was still unclear as to how or why his parents would do this though: "I didn't get it. I realised more and more that it was them, but man, what exactly were they trying to do?" (HC, 79)

Anger

Feelings of anger and irritability were experienced by four of the participants during the PPP. These participants reported such things as, "I got really pissed off at things" (SD, 45), "I had a lot of hate" (HJ, 97), and "I use to get quite angry. I went off a

bit. I just didn't know how to contain my temper" (MP, 170). Often associated with the anger the participants described acts of aggression. These included starting arguments with others, shouting at people, getting into fights, and damaging property. One participant even targeted himself with his aggression. He reported that "I turned the aggression on myself. At one stage I knocked myself out…I was just beating away at my head" (MP, 108).

The participants' anger was associated with a sense of "being mistreated" (SD, 67) or treated unfairly. In most cases they were able to identify the source of these feelings. For two participants their anger was directed at a parent. One of these participants experienced intense anger towards his mother after she separated from his father. He reported "hating" his mother so much that at times "I wanted to kill her for doing it" (HJ, 219). The other participant described a "falling out" with his father, "I felt that he wasn't really listening to me. I was feeling quite depressed and he said snap out of it. I felt that he wasn't being understanding so I got angry" (MP, 79). MP reported that, over time, he came to "thrive on violence" (MP. 183) and used it as a means of feeling good about himself and gaining respect from others:

> I had quite a few fights at school. I was getting into so many fights with people picking on me and stuff. There was the odd time when the person who was having a go at me came out worse off, and I felt really good about myself. I felt that I had gained more respect….Violence was the only way to get people's respect. (MP, 182)

In another case, a participant described his aggression as a retaliatory response to his girlfriend's own violent behaviour:

> The chick I was going out with at the time drove me up the wall, just arguing. She started attacking me. I said, I warn you now if you don't stop I will not be responsible for my actions. She carried on hitting me so I just pummelled her straight into the ground. (HJ, 181)

In some instances the participants had difficulty identifying the source of their anger. When one participant was asked if he was angry about anything in particular he replied, "no, not really, just life and how things were going (SD, 58). In these instances the participants often described reacting with anger and aggression to seemingly innocuous situations. For example, "I just noticed I would snap at things that really weren't worth snapping about" (MP, 42) and "We would be sitting down watching TV and my mate would say hurry up and do the dishes and I would say something like 'no, piss off'. I would just snap back. Normally I can take comments like that" (PS, 25). This same participant also reported picking a fight with a child he did not know and could not understand why he did it:

> I just decided to pick a fight. I have never fought in my life. I was on the train and I would just stare down people. I would just stare at people until I got a reaction….I ended up picking a fight with this little kid and he was just sitting there at the bus station. (PS, 71)

Pleasant Emotional Changes

Four of the participants described experiencing emotions during the PPP that they found to be pleasant, namely feelings of love and happiness. These participants reported "feeling really really good" (WK, 23) and feelings of "intense love" (MC, 13). Associated with these feelings the participants described feeling a sense of "connectedness with others" (MC, 20) and a sense of "contentment" (WK, 54). The participants also described changes in their behaviour in response to these feelings. They reported being "overly nice to strangers" (WK, 77) and "really physically affectionate" (HC, 203). One participant also reported laughing a lot and that he "couldn't stop smiling" (HC, 70). More extreme behaviour associated with these feelings included "taking my clothes off and walked the streets naked. I just didn't care because of the way I was feeling" (MC, 6). It is of note that, overall, pleasant emotional changes were far less common than unpleasant emotional changes and that all of the participants who reported experiencing pleasant emotional changes during the PPP also experienced unpleasant emotions during this time.

On reflection, the participants found it difficult to account for the onset of these pleasant emotions. The source of these emotions could not be easily linked to positive environmental events and their origin was often described as endogenous. For example, PS reported that "its difficult to work out why I was feeling so good. I can't remember anything good happening that would make it make sense….it came from inside" (PS, 356). Another participant explained the source of these feelings as follows, "just generally having a good time, nothing in particular, living away from home, being around friends that's all. It was just me" (MC, 35).

The Stressful World

Another theme that was drawn from the participants' accounts of their pre-psychotic emotional experiences was 'the stressful world'. Throughout the participants' narratives were comments related to the occurrence of stressful life events and how they impacted on the emotional self. For the participants the occurrence of these life events was closely associated with the precipitation and perpetuation of their negative emotional experiences during the PPP. The participants described "when all the shit was happening at work I just couldn't handle it anymore and that's when the depression hit" (SC, 415) and "the stuff that happened back then, it freaked me totally out and it all just went from there" (VD, 96).

Four different types of stressful life events were described by the participants that constituted their stressful world. The most common of these was labelled 'major life changes and transitions'. Examples of these included leaving school, changing jobs, and travelling overseas. One participant reported "just after I left school I was road working. Just the whole change of that, and not being with the same people. I found the change stressful... eventually the whole situation got to me" (AL, 6). Another participant described his experiences of moving overseas and trying to find a job:

> I wasn't ready for getting a job and moving overseas. It was all a bit too much for me. I just don't think I was ready for it. It was just a massive step from living at home in New Zealand and having all that done for you to going overseas and doing it all yourself. (PS, 56)

This participant described the onset of depression associated with this experience.

The second most common life event that emerged from the participants' narratives was exposure to verbal and physical abuse. This included being threatened, intimidated, and bullied. One participant reported that "people teased me and gave me a hard time…They would get in my face, and I would tell them to go away and they would keep persisting…They called me a 'gump', like a clumsy cartoon character" (MP, 173). Another participant spoke about being threatened by a peer:

> This guy from my work had a neighbour who was a prospect for the Mongrel Mob gang and they were pretty much talking about different ways they were going to kill me. Yeh, he had a knife and he was using it to show me how sharp it was. It was quite a big knife. I freaked out and got the hell out of there. (VD, 72)

For other participants their experience of abuse was more subtle, involving intimidation. For example, "the guys I was working with treated me like crap. They would stand over me and stuff like that. Not too obvious, just enough" (AL, 21).

Another type of adverse life event that was evident in the participants' narratives was associated with educational or vocational failure. Failing at school was the most common of these. Five of the participants reported difficulties associated with their school work and failing tests and examinations. One participant commented that "I felt gutted about my schoolwork. I would come to a test and I would not have learnt what I should have, and then not get the mark I wanted. I use to get pretty down" (HJ 152). Difficulties

with vocational attainment were also evident in the participants' narratives, “One of the main things was that people at work were doing a lot better than I was. Eventually I got fired” (SD, 125). Another participant reported not being able to get a job altogether, "I felt pressure to get a stable job. I thought I was never going to get one. I used to worry about it a lot" (AC, 96).

Finally, interpersonal conflict with family members and partners was reported by some of the participants as a major stressful life event. Most commonly the participants reported conflict between them and their parents. One participant said that his main source of stress was having a “falling out” (MP, 134) with his father. Another participant described “arguing all the time with his parents” (VD, 287) over his chosen peer group and the way he dressed. Conflict within sexual relationships was another source of stress for the participants. One participant described ongoing conflict between him and his girlfriend:

> I heard from a friend that she cheated on me, so I was gutted. I was real upset. I talked to her and she said that it was a lie. I was thinking why would your friend lie like that… Then she just started blaming me like it was my fault. I was really upset and stressed out about the whole situation (HJ, 189).

Although the participants identified these adverse life events being part of an external world, they could have actually developed in part as a consequence of the personal changes they experienced during the PPP. This issue was raised in a number of the interviews. The participants tended to accept this as a possible explanation, but did not

believe it to be the case for them. Two of the participants' responses to this line of questioning was "not for me. If all these shit things hadn't happened I wouldn't need to be talking to you today about it" (MC, 466) and "those things [life events] had been going on before anything else changed (AC, 229). These comments highlight the participants' tendency to associate the emotional changes they experienced during the PPP to the stressful world impacting on their sense of self.

Experiencing the World Differently

Associated with the changes in the emotional self and stressful life events the participants experienced during the PPP they also described a range of vague anomalous experiences and sensations that represented a change in their experience of the outer world. The participants made comments such as "things just being different" (AC, 122) and "it was unusual it had all changed" (HC, 32). These experiences were categorised as either 'changes in the way the environment felt' or 'sensing that something significant was going to happen'.

Changes in the Way the Environment Felt

Six of the participants described vague changes in the way the environment felt to them (LD, SC, MC, HC, PS, AL). One participant described this as "just like talking to people, things were not going the way it was meant to…. Just looking around outside and stuff like that. It was strange (LD, 242). Another said "it is hard to say how things were different, but it was" (SC, 134). For some of the participants these experiences were associated a changing sense of connectedness with the world and those around them. One

participant reported sensing as though he had become part of a "single consciousness…as though everyone was one person with no barriers between them. I felt more connected, at a spiritual level. It was strange" (MC, 46). Alternatively, another participant described becoming more cut off from the world and feeling life he was living inside an invisible box, "It was like I was in a box in my head. Like I would see walls and feel I was in a box (HC, 14).

When the participants' accounts of these experiences were analysed in detail they could often be categorised as instances of either d*éjà vu*— an inappropriate sense of familiarity— or *jamais vu*—an inappropriate absence of familiarity. The most common of these were experiences of *jamais* vu. Examples of this include "one day I walked into the house and things felt different. The whole family was sitting down here in the lounge and it was just hard out, it was not right….Just really intense, really freaky". (AL, 231), and "I got home and everything looked different to me…. Like it had all changed" (PS, 272). Another participant reported that he found his bedroom uncomfortable to be in and that he slept in the living room because "I just seemed to be more comfortable in there" (LD, 278). Examples of *déjà vu* recalled by the participants are as follows. While travelling overseas one participant experienced "a wicked sense of déjà vu. It was this feeling that I had been there before at some point, but I wasn't too sure when. It was quite scary (SD, 263). Another participant described getting the feeling of "meeting people before, even though I had only met them for the first time" (WK, 161).

Sensing Something Significant was Going to Happen

Five of the participants described a sense that something significant was going to happen to them during the PPP (MP, SD, PS, AL, WK). This is illustrated by the following quotes, “I knew that something was going to happen to me” (PS, 354) and “something big was going to go down and I knew it” (MP, 212). Both positive and negative events were predicted by these participants. One participant said “I thought something big was going to happen. I started freaking out” (SD, 115), and "I expected things to change and something to happen. I didn't know it was going to turn out like this though" (WK, 120). Another participant experienced a premonition that he was going to die. This premonition closely coincided with his feelings of depression, “There was a feeling of impending doom…When the feelings of loneliness started I had this thought, like a premonition, that I was going to die” (SD, 56). Other participants described “having a sense I was going to be famous” (MP, 240), that "some sort of miracle was going to happen"(WK, 188), and believing that their parents were going to abandon them. Sensing something significant was going to happen was often associated with intense emotional reactions. For example, one participant described “I was in tears because I really thought it was going to happen” (AL, 327). When the participants were asked to elaborate further on these experiences they often found it difficult to provide any specific details, such as exactly what they thought was going to happen or when it was going to occur. Reflecting back on these experiences, one participant concluded that for him the sense that something significant was going to happen arose from his belief that the changes he was experiencing "must have occurred for a reason" (AL, 333) and not knowing what that reason was.

Another participant reported a similar explanation. He said "with the stuff that was going on something big had to happen" (PS, 249).

Being Confused

The sixth theme drawn from the participants' interviews was 'being confused'. This theme was evident in all of the participants' narratives and represented the difficulty they had making sense of the changes were experiencing in themselves and the world, during the PPP. This theme is illustrated by the following excerpts: "It was really confusing" (PS, 354); "I was just thinking to myself, oh shit what's happening" (VD, 118); "I had no idea what was going on" (LD, 24); and "I didn't know what was going on, that is why I was confused" (HC, 215). The participants described spending a considerable amount of time and energy trying to understand what was happening. For example, one participant said that he would "lie awake all night thinking about it, wondering what it is, why it was happening" (AL, 162). For some of the participants the confusion, in combination with the negative emotional changes and stressful life events they were experiencing, was the most distressing aspect of the PPP for them. One participant said "It wasn't just anger, I was stressed out by things and confused all at the same time. That was the worst thing" (HJ, 194). Another participant said that "just not knowing why that (emotional changes) was happening. That was the biggest problem" (SD, 19).

Commensurate with the participants' confusion and difficulty making sense of their experiences, they tended to have difficulty describing these changes to others. The difficulty one participant had in describing his experiences to those around him is illustrated in the following excerpt:

> I just started to talk to people about it and they didn't understand. I asked my brother, 'what the fuck do you think is going on'? You ask people trying to figure it out, and you try and say what you are thinking and you can't even get that out. (AL, 153)

In response to the confusion the participants were experiencing they often described searching for an explanation for what was happening. The following quote illustrates this theme, "I just wanted to know what was happening and be able to deal with it. So I began to try and find out what was going on" (LD, 32). The most common means by which the participants searched for an explanation was making changes in their lives and daily patterns of living. For example, three of the participants changed jobs. Another two participants left their jobs and became students. One participant commented that "at that stage I was hoping that with the study things it would get better, but as it went on it wouldn't go away and it got worse" (VD, 403). Moving to different towns was also common, "I went down to (place name) to live with my aunty. When I got down there I freaked out. So I thought fuck this and came back up here to live" (AL, 85). One participant adopted Christianity in an attempt to find an explanation for what was happening:

> I became a Christian, and sought of straightened my life out and got things straight in my head. I stopped taking drugs and stopped drinking and stuff like that, going around with girls all the time. Tried to sort my self out. (MC, 121)

Similarly, another participant changed religions in an attempt to understand what he was experiencing, "so in the end I became a Christian. It really upset my parents, but I thought it was the only way to get to the bottom of things" (WK, 68).

Generally, the participants reported little success finding an explanation for the changes they were experiencing during the PPP and described ongoing confusion during this time. This lack of success seemed to be associated with the participants not actually knowing what changes would make things better. For example, one participant said "I didn't really know what was happening or what to do about it. I just knew I needed to do something" (SC, 197).

Becoming Progressively Worse

The final interpretative theme that emerged from the participants' narratives was 'becoming progressively worse'. This theme represents the escalation in emotional distress that the participants experienced over the course of the PPP. During this time the majority of participants found themselves "getting more and more stressed out" (MC, 185) and that "things were getting worse" (AL, 264). One participant commented that "I was just losing it. Day after day just getting more and more worked up until it got real bad (PS, 81). This process was described as "going down hill" (MC, 181) by one participant. The intense distress experienced by one participant is illustrated by the following excerpt:

> I was really wound up and stressed…. Like I would pick at my face. Just pick away. I rubbed my shoulder once until it was like there was no skin there.

> Just like rubbing and rubbing. I would pull my hair out. I would just get really tied up. (AL 258)

The build up of distress over the course of the PPP tended to have a deleterious effect on the participants daily functioning. Examples of this reported by the participants included not being able to concentrate at work or school, becoming more untidy at home, exercising less, and having a poorer standard of hygiene. These decreases in functioning appeared to continue throughout the PPP, up until the development of florid psychotic features. Closely associated with this decrease in functioning the participants also described becoming more socially isolated and cut off from the world. The participants reported "I would just go into my room and read my bible. I was feeling so bad. I would just huddle myself in there away from it all" (PS, 101), "I started to stop getting along with people. As I got more depressed I got more withdrawn" (MP, 89), and "needing to get out of it. So I wouldn't want to see anyone" (HJ, 333). As can be seen from these exerts, for the participants social withdrawal may have functioned as an avoidance reaction to the adverse life events and intense emotional changes they experienced during the PPP.

Another feature of the participants' narratives that was closely associated with their increasing distress over the course of the PPP was the tendency for there to be a decrease in positive emotions during this time. As can be seen from table 6, positive emotions tended to be experienced during the early part of the PPP and negative emotions tended to dominant the latter part of this time. The participants described this pattern of changing affect as follows, "over time I just started to feel down, more and more, until there was nothing positive left" (MC, 96) and "the good went and I was only left with bad stuff,

feeling shit" (HC, 428). Only one participant (PS) experienced positive emotions after first experiencing negative emotions. This participant reported that after initially experiencing depression he began to experience anger. The anger was also accompanied by short periods of intense happiness. He described this as follows:

> I remember coming home from having a fight at work with a dude. I came home and was really happy for some reason. I would have all these thoughts of going to movies and cracking funnies and all that. It was really weird, and then the next day I would go back into the slump. (PS, 71)

A final feature of the theme 'becoming progressively worse' was the close relationship between the participants' experiences of escalating distress over the course of the PPP and the onset of psychotic symptoms. For the majority of participants strong negative emotional experiences immediately preceded the onset of their hallucinations and delusions. For example, one participant described first experiencing auditory hallucinations after an argument with his girlfriend during which he became "really upset" (HJ, 190). Another participant recalled that his delusions first emerged when he was in a police cell after being arrested. He was "terrified" and "depressed" and begun to believe that he was going to be sent to hell (MC, 62).

On reflection, the participants tended to attribute the escalation in their distress during the PPP to the stressful life events they experienced during that time. Often a feedback loop between the stressful life events and their emotional distress was described by the participants. For example, one participant reported that "the stuff at work happened

and it got me really down… and that just seemed to make the stuff at work seem worse" (WK, 79). Another participant reported "when all the things started happening with mum and dad I got really down about it and then it just started a cycle…the more bad I felt the worse things got at home" (SC, 51). Another explanation for the build up of distress was offered by a number of other participants. These participants believed that the escalation in their distress was related to the ongoing confusion they experienced during the PPP and their inability to understand what was happening to them. For example, "I think the depression got so bad because I couldn't understand what was happening" (LA, 185).

Acquaintance Themes

Four interpretative themes were drawn from the acquaintances' accounts of the PPP that were related to the emotional changes the witnessed in the participants during this time. They were: (i) The vagueness of the changes, (ii) the emergence of a new emotionality, (iii) stress and pressure building up over time, and (iv) a state of confusion. These themes and the subordinate themes they encompass are displayed in figure 2.

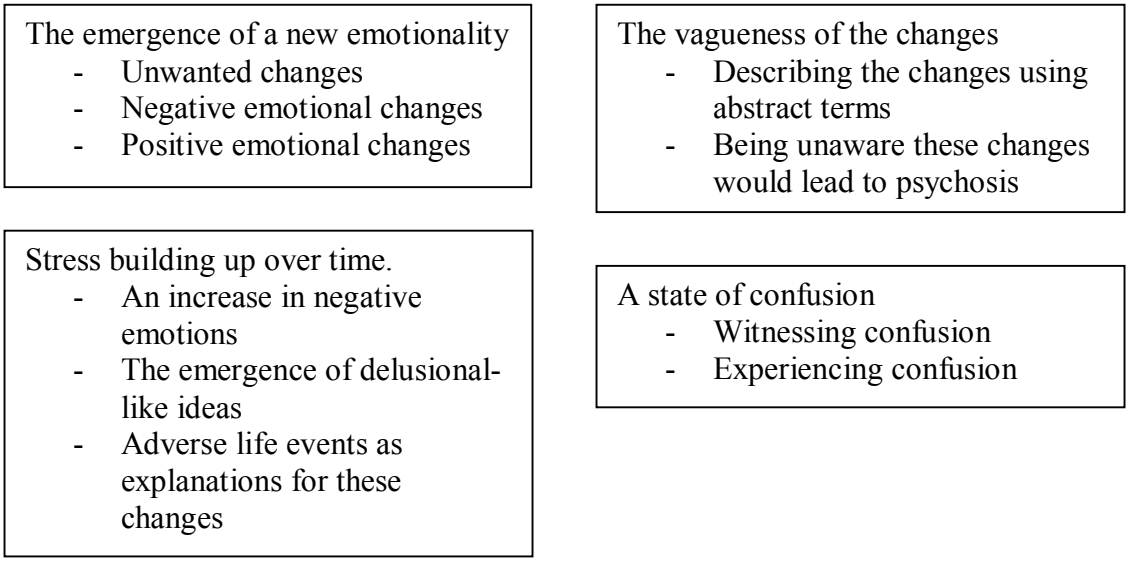
The Vagueness of the Changes

A central theme that was drawn from the acquaintances' interviews was the difficulty they had describing the emotional changes they witnessed in the participants during the PPP. All of the acquaintances commented on the subtle and vague nature of these changes, especially early on during the PPP, and the difficulty they had in defining their exact nature. The following quotes illustrate this theme: "It was really hard to explain the changes back then" (AC acquaintance, 15); "I knew something had changed, I just

didn't know what" (MC acq, 16); "There was a significant thing there, but it was unclear" (PS acq, 57); and "lots of little changes. It is really hard to pin point one thing and say this is what I noticed on this date" (AL acq, 31).

Figure 2

The Interpretative Themes Drawn From the Acquaintances' Accounts of the Pre-Psychotic Period



Given the vague nature of the changes witnessed by the acquaintances during the PPP, they were often described using abstract terms. Terms used by the acquaintances to describe these changes included "lost" (LD acq, 289), "strange" (AC, 21), "directionless" (WK acq,

7), and "becoming very sensitive. Sort of weaker" (HC acq, 15). Describing these changes as being like "normal adolescent stuff" (VD acq, 115) was also evident in the acquaintances narratives.

Reflecting back on the vagueness of the emotional changes during the PPP, a number of acquaintances commented that they were unaware that these changes would eventually lead to psychosis. The acquaintances commented "I had no idea that this thing was coming along" (AL acq, 242), "we had no idea it was going to build up to be this" (LD acq, 462), and "in all, I still can't see any symptoms of it coming, and I wish to Christ that there was something there" (PS acq, 129).

The Emergence of a New Emotionality

The theme 'the emergence of a new emotionality' represents the acquaintances descriptions of the changes they witnessed in the participants' overall mood and affective state during the PPP. The acquaintances described the changes in the participants' emotionality via two interrelated process. First of all they reported the disappearance of core aspects of the participants' previous temperament and mood state over the course of the PPP. For example, one acquaintance made references to losing the part of the participant that was "easy going and quiet" (MC acq, 32). Other acquaintances commented that "he was usually friendly and co-operative, but this stopped" (AC acq, 71) and "his usual drive to achieve began dropping off" (PS acq, 148). For one acquaintance the changes in emotionality he witnessed in his son during the PPP represented a fundamental change in the person he once knew, "somewhere in there all his individuality disappeared. It sort of went from a clear picture to a wishy-washy picture" (PS acq, 156). The second

process related to the theme 'the emergence of a new emotionality' was a corresponding emergence of new moods and affective states in the participants during the PPP. The acquaintances described witnessing people who were usually quiet and reserved becoming "over the top", and "more and more wild and stubborn" (VD acq, 27) or "getting emotionally unstable and becoming depressed" (AL, acq, 166).

Reflecting back on the changing nature of the participants' emotionality during the PPP, the acquaintances often described these changes as unwanted and felt a sense of loss associated with them. The acquaintances described "I hated seeing him go through it. I didn't want that" (LD, acq, 272), "losing the son I once knew" (MC acq, 46), and "I didn't like the changes that were happening" (VD acq, 93). One acquaintance described witnessing these changes as very distressing. She reported "just watching him go through that, it's hard. I get upset because I think, oh why did it happen to him?" (LD acq, 264).

The specific emotional changes that the acquaintances witnessed in the participants during the PPP are represented by the themes 'positive emotional changes' and 'negative emotional changes'. These are described next. It is important to note that , overall, there was a high degree of consistency between the emotions reported by the acquaintances during the PPP and emotional experiences described by the participants during this time. In only one case was an acquaintance unable to recognise all the emotional changes reported by the participant (WK). Although WK described feelings of guilt during the PPP this was not reported by his acquaintance.

Negative Emotional Changes

The acquaintances reported a number of negative emotional changes in the participants during the PPP. These included depression, anger, and anxiety. Reports of "depression", "felling down" (LD acq, 239), and "being flat" (AL acq, 53) were the most common of these. One acquaintance described his son's depression as follows:

> He became depressed and didn't really care about things anymore. It was his high school years that were quite interesting. It didn't matter what he turned his hand to he excelled…. Somewhere along the line that all fell off. He went from being good to I don't care about being good. (PS acq, 5)

Another acquaintance commented on the pervasive nature of his son's depression, "He would have short highs. He bought this car. It gave him a buzz for a couple of weeks, but when it wore off he was back to the way he was before, really down" (AL acq, 77).

Phrases used by the acquaintances to describe the participants' anger included "he looked quite agitated" (LD acq, 33), "he was really irritable" (HJ acq, 15), "having a short wick" (AL acq, 67) and "he was confrontational and argumentative" (SD acq, 65). Aggressive behaviour was commonly observed along with the anger. This included acts of both verbal and physical aggression. For example, "He got very aggressive. He would shove me against the wall, and yell and scream" (LD acq, 219). Another acquaintance described a situation at work where one of the participants attacked a work mate with a shovel:

> One day he started attacking a guy with a shovel. He lost control, and you can see the side of the van where he dented it….If I hadn't been there I would believe that he would have hit the guy with the shovel and possibly killed him. (AL acq, 52)

One acquaintance commented that the aggression she witnessed in her partner escalated with his feelings of jealousy, “He would get quite jealous and possessive and accuse me of playing him off against other guys….He got agitated when I went out with other people” (HJ acq, 118).

The acquaintances descriptions of anxiety included “panic” (LD acq, 173), "looking really scared" (MC acq, 44), and “anxiety attacks” (AL acq, 90). Anxiety was often described by the acquaintances as presence of various physiological symptoms such as sweating, shaking, and restlessness. One acquaintance described her son's anxiety in the following way:

> He would get all worked up and worried over the smallest things. Like he would pace around the house. He would stop eating, stop sleeping, just stop functioning.... This would all because someone said something too him at work that made him worry. (MC acq, 142)

Associated with the onset of these negative emotions, a variety of behavioural changes were identified by the acquaintances. By far the most common of these was social withdrawal. The acquaintances often reported the participants becoming “unsociable” (LD

acq, 245), “isolated” (MC acq, 393), and “socially withdrawn” (VD acq, 88) during the PPP. One acquaintance commented that “I think he was basically alone with his worries. They took over and isolated him from everything” (AL acq, 402). Another acquaintance said "he stopped seeing his friends and moved away from the people he knew. Being around people was really difficult for him (VD acq, 213). Other behavioural changes reported by the acquaintances included running away from home, truancy from school, decrease in appetite, difficulties with activities of daily living, discipline problems, insomnia, lethargy, suicidal behaviour, and poly-substance abuse.

Positive Emotional Changes

As well as negative emotional changes, the acquaintances also described the participants experiencing positive emotional changes during the PPP. Reports of positive emotions ranged from being “seemingly happy” (HC acq, 6) to being “over the top and excessive happiness” (MC acq, 94). Commonly associated with these emotions were descriptions of overly affectionate and unpredictable behaviour. For example, “there was a lot of him coming in and giving me big cuddles and telling me he loved me and that he loved everybody” (MC acq, 92). Another acquaintance described inappropriate sexual behaviour, “he ended up trying to cuddle and kiss this girl and stuff. He hardly knew her” (WK acq, 228). Other behaviours associated with onset of these positive emotions changes included giving away personal possessions, changes in dress style, and witnessing marked changes in the participants’ vocational and educational goals. For example, one acquaintance described her son quitting university and hitchhiking around the country (MC acq).

Stress Building up Over Time.

'Stress building up over time' was another theme that was drawn from the acquaintances' narratives of the PPP. This theme represents the escalation in stress and pressure that the acquaintances witnessed in the participants during this time. One acquaintance directly reported noticing "a build up of stress over time" (DL acq, 41), while another described "things basically got worse and worse for him [the participant]" (MC acq, 240). Associated with this build up of stress, the acquaintances often described the participants being "extremely stressed" (LD acq, 147) and "being under so much pressure" (AL acq, 43) during the latter stages of the PPP.

Central to the acquaintances accounts of the build up of stress over time was a decrease in positive emotions and increase in negative affect over the course of the PPP, including depression, anxiety, and anger. One acquaintance commented that "the elation started to go and the worry crept in" (MC acq, 296). This same acquaintance described her son becoming "haunted…it was like something had taken over him" (MC acq, 563). Another acquaintance commented on her partner becoming more irritable during the PPP. She said "as things went on he became more and more irritable and he definitely wasn't as happy" (HJ acq, 22).

A number of acquaintances reported that along with the increase in negative affect during the PPP, over time, they observed the emergence of the ideas and thoughts that in time were to become delusional beliefs. For example, one acquaintance reported her son "becoming more and more paranoid as things went along" (HC acq, 67). Another acquaintance remembered her son feeling anxious in social situations and that over time he began to believe that he was being followed and others were conspiring against him:

> "He said he experienced a number of situations where he felt threatened. Around this time he began to report that other people that he had not met knew his name and were talking about him….He continued to have these experiences and over time he became progressively more paranoid. (VD acq, 83)

On reflection, the acquaintances tended to attribute the build up of stress over the course of the PPP to a range of adverse life events that the participants had experienced. One acquaintance commented that "life has been one battle for him" (AL acq, 44). Another said "he had so much bad shit happen to him during that time looking back it is not surprising it turned out the way it did" (VD acq, 100). Specific adverse life events identified by the acquaintances were bullying, relationship break ups, difficulties at school or with work, and parental conflict. One acquaintance illustrated the stress her son experienced when he came to leave school and find a job:

> "He wasn't doing well at school and wanted to leave so they said that if he was going to leave school he had to get a job. That was too much for him because he didn't even know how to get a job. I think that put him under a heck of a lot of stress and pressure. (LD acq, 140)

A State of Confusion

'A state of confusion' was the final theme that emerged from the acquaintances narratives. This theme not only represents the confusion the acquaintances witnessed in

the participants during the PPP, but also as the sense of confusion they themselves experienced during this time. First of all, the acquaintances commented on the confusion they witnessed in participants. One acquaintance commented that "he was confused in his thinking. What he was trying to say wouldn't make sense" (AC acq, 97). Other acquaintances commented "he was just totally confused about things and what was going on and he couldn't seem to work it out" (HJ acq, 67) and "he was really messed up about it and I don't think even he knew what was going on" (SD acq, 289). The second component of this theme was the confusion that the acquaintances themselves experienced in response to witnessing the participants' confusion. This is illustrated by the following excerpts: "we were totally confused. He knew he wasn't right, and we were trying to pinpoint what it was" (LD acq, 84), and "It was a confusing time for everybody. He [the participant] was really confused, and then I began to get confused as to why he was confused about what was going on" (MC acq, 482). Other acquaintances commented that the PPP was "confusing for him [participant] mostly, but confusing for other people too, definitely, because other people don't understand what is going on" (AL acq, 275).

Summary

This chapter presented the main interpretative themes that emerged from the participants' and acquaintances' data sets related to emotional experiences during the PPP. Direct quotes were included in this chapter to illustrate these themes and were referenced by the speaker and the appropriate line of the interview transcript.

Seven main themes emerged from the participants' data set. First of all, the theme 'changes in the emotional self' represented the global change in the participants' overall

emotional state they experienced during the PPP. The participants described having little control over their emotions during this time and also commented on the intense nature of these changes. Although all the participants experienced a variety of different emotions over the course of the PPP, all of them identified one emotion that dominated their experiences during this time. It is of note that negative emotions were more likely to dominate the participants' experiences during this time than positive emotions.

The theme 'unpleasant emotional changes' represents the various types of negative emotions that the participants experienced during the PPP, including depression, anxiety, anger, and guilt. The participants' experiences of depression were closely associated with low self esteem, perceptions of not being good enough, and in one case a sense of guilt. Anhedonia and suicidal ideation were features of the participants' depression. The participants' experiences of anxiety were characterised by a sense of danger and were associated with hypervigilance and a range of physiological reactions. Behaviours designed to protect the participants from danger were commonly used to manage the anxiety. Over time, there was a tendency for feelings of paranoia and persecutory beliefs to develop alongside the anxiety. Some participants described becoming more suspiciousness of those around them and making more direct interpretations of hostility from others. Feelings of anger were commonly associated with acts of verbal and physical aggression and a sense of being treated unfairly. In most cases the participants identified the source of their anger arising from conflict with members of their family. In other cases a specific source of anger could not be identified. In these instances the participants described reacting with anger and aggression to seemingly innocuous situations.

The theme ‘pleasant emotional changes’ represents the positive emotional changes the participants experienced during the PPP, including strong feelings of love and happiness. These feelings were often associated with a sense of contentment and connectedness with others. Overly affectionate behaviour often accompanied these changes, but more extreme behaviours such as taking ones clothes off in public were also described by the participants. The participants generally found it difficult to account for the onset of these pleasant emotions and their origin appeared to be endogenous. It was of note that, overall, pleasant emotional changes were far less common than unpleasant emotional changes during the PPP and that all of the participants who reported experiencing pleasant emotional changes during the PPP also experienced unpleasant emotions during this time.

The fourth theme that was drawn from the participants’ accounts of the PPP was ‘the stressful world’. This theme represented the close association the participants made between the onset and perpetuation of their negative emotional experiences during the PPP and the occurrence of stressful life events. Four types of stressful life events were identified by the participants. These were major life changes and transitions, exposure to abuse, educational or vocational failure, and interpersonal conflict.

The fifth theme drawn from the participants’ narratives of the PPP was ‘experiencing the world differently’. This theme represented the range of vague anomalous experiences and sensations that the participants experienced during the PPP. Two specific types of changes were identified under this theme. The first of these was labelled ‘changes in the way the environment felt’. These changes were characterised by changes in the participants’ sense of connectedness with the world and those around them.

Experiences of d*éjà vu*— an inappropriate sense of familiarity— and *jamais vu*—an inappropriate absence of familiarity – were often reported by the participants. The second type of change identified under this theme was sensing that something significant was going to happen. A range of both positive and negative events were predicted by the participants. Sensing something significant was going to happen was often associated with intense emotional reactions.

The sixth theme drawn from the participants' interviews was 'being confused'. This theme describes the difficulty the participants had making sense of the pre-psychotic changes they experienced. For some of the participants the confusion, in combination with the negative emotional changes and stressful life events they experienced, was the most distressing aspect of the PPP for them. Commensurate with the participants' confusion and difficulty making sense of their experiences, they also had difficulty describing these changes to others. In response to the confusion, the participant described searching for an explanation for what was happening. The participants attempts to do this involved doing such things as changing jobs, becoming a student, moving to a different town, and changing religions. Generally, the participants reported little success finding an explanation for the changes they were experiencing during the PPP and described ongoing confusion during this time.

The final theme that was drawn from the participants' data set was 'becoming progressively worse'. This theme represents the escalation in emotional distress that the participants experienced over the course of the PPP. This build up of distress tended to have a deleterious effect on the participants daily functioning and often lead to social withdrawal. The decreases in functioning appeared to continue throughout the PPP, up

until the development of florid psychotic features. It was also found that positive emotions tended to be experienced during the early part of the PPP and negative emotions tended to dominant the latter part of this time. Strong negative emotional experiences were often reported to immediately precede the onset of psychotic symptoms. The participants often attributed the escalation in the distress during the PPP to the stressful life events and ongoing confusion they experienced during this time.

Four interpretative themes were drawn from the acquaintances' interviews that were related to the emotional changes the witnessed in the participants during the PPP. The theme 'the vagueness of the emotional changes' represents the subtle nature of the changes the acquaintances witnessed in the participants during this time and the difficulty they had in defining the exact nature of these changes. These changes were often described using abstract terms and the acquaintances were unaware that these changes would eventually lead to psychosis.

The second theme that was drawn from the acquaintance interviews was 'the emergence of a new emotionality'. This theme represents the overall change in mood and affective state the acquaintances witnessed in the participants during the PPP. First of all, the acquaintances described an amelioration of the participants' previous temperament and mood state over the course of the PPP and an emergence of new moods and affective states during this time. The acquaintances described witnessing the onset of a number of specific emotions during the PPP. These included depression, anger, and anxiety, as well as positive emotional changes such as happiness. Reflecting back on these changes, the acquaintances described them as unwanted and felt a sense of loss in response to seeing these changes in their loved ones. Over all, there was a high degree of consistency

between the emotional changes reported by the acquaintances during the PPP and emotional experiences reported by the participants during this time.

The third theme drawn from the acquaintances narratives was 'stress building up over time'. This theme describes the escalation in stress and pressure that the acquaintances witnessed in the participants during the PPP. Associated with this increase in stress was a decrease in positive emotions and increase in negative emotions over the course of the PPP. Along with this increase in negative affect, a number of acquaintances observed the emergence of the ideas and thoughts that in time were to become the participants' delusional beliefs. The acquaintances tended to attribute the build up of stress during the PPP to a range of adverse life events that the participants had experienced. These included, bullying, difficulties at school and gaining employment, and interpersonal conflict.

The final theme that was drawn from the acquaintances' interviews was 'a state of confusion'. This theme not only represented the confusion the acquaintances witnessed in the participants during the PPP, but also the confusion they themselves experienced during this time in response to witnessing the participants' confusion.

CHAPTER NINE: DISCUSSION

The purpose of the present study was to explore in-depth the experiential nature of the emotional changes that occur during the pre-psychotic period (PPP). The specific research questions posed by this study were: 1) what is the experiential nature of the emotional changes that occur during the PPP? And 2) what features of delusional atmosphere are consistent with experiential accounts of the emotional changes that occur during the PPP? This chapter will begin by presenting the main findings that emerged from the data related to these two research questions. The limitations of this study and the implications of the research findings to researchers and clinicians will then be discussed.

The Experiential Nature of the Emotional Changes That Occur During the Pre-Psychotic Period

A number of findings can be drawn from the research data related to the experiential nature of the emotional changes that occur during the PPP. These findings will be presented under five broad headings. These are experiencing changes in emotionality; experiencing a sequence of different emotional changes; experiencing negative emotional changes; experiencing positive emotional changes; and experiencing the build of distress over time.

Experiencing Changes in Emotionality

A main finding that can be drawn from the present study was the general change in emotionality that the participants experienced during the PPP. This finding is clearly

evidenced in the participant theme 'changes in the emotional self' and the acquaintance theme 'the emergence of a new emotionality'. Under the theme 'changes in the emotional self' the participants described a global change in their emotional state during the PPP. The participants often commented on the intense nature of these emotional changes and the little control they had over them. These emotional changes were also considered by some participants to be the first noticeable sign that something had changed, heralding the onset of the PPP. In line with these experiences, the acquaintance theme 'the emergence of a new emotionality' describes the amelioration of the participants' previous temperament and mood and a concurrent emergence of new moods and affective states over the course of the PPP.

The tendency for the participants to experience an overall change in emotionality during the PPP is generally consistent with previous research, suggesting that powerful emotional changes are prominent features of the PPP (Freeman & Garety, 2003; Turnbull & Bebbington, 2001). The participants' experiences that these emotional changes heralded the onset of the PPP is also consistent with research in this area (Berner, 1991; Berrios, 1996; Yung & Jackson, 1999). The PPP has been shown to have a gradual and insidious onset with affective symptoms tending to occur first (Yung & Jackson, 1999). These symptoms are then typically followed by more attenuated psychotic symptomatology. In addition to supporting the research in this area, these findings add to the literature by highlighting the main experiential features of this pre-psychotic change in emotionality. In particular, the present findings highlight the pervasive nature of the emotional changes people can experience during this time and suggest that a sense of uncontrollability is a key feature of these changes. The present findings also indicate that the change in emotionality

experienced by people during the PPP can be difficult for those around them to describe and define. The acquaintance theme 'the vagueness of the emotional changes' relates to this finding. This theme represents the acquaintances' tendency to describe the changes they witnessed in the participants during the PPP as subtle and difficult to define, especially during the start of the PPP. Being unaware that these changes would eventually lead to psychosis was also a feature of this theme. This finding is consistent with previous research, showing that the observable changes associated with the onset of the PPP tend to be non-specific and transient in nature (Yung & McGorry, 1996b). The acquaintances' description of these changes seeming no different to normal adolescent development highlights this point. McGorry and colleagues (1995) found that a large amount of the changes associated with the PPP commonly occur in non-clinical adolescent populations.

Experiencing a Sequence of Different Emotional Changes

A second finding that can drawn from the research data was the tendency for a sequence of different emotional changes to be experienced by the participants over the course of the PPP. Related to this finding is the participants' descriptions of 'identifying a sequence of specific emotional changes'. All of the participants commented on the changing nature of their emotional selves over time and were able to identify a sequence of different emotional changes they experienced during the PPP. The specific emotions experienced by the participants were depression, anxiety, anger, guilt, and feelings of love and happiness. The sequence of these emotions over the course of the PPP varied between the participants. In line with the participants' accounts, the acquaintances also commented on the range of different emotions the participants experienced over the course of the PPP,

and made specific references to the onset of both negative and positive emotions during this time. Overall, there was a high degree of consistency between the participants' and acquaintances' accounts of these pre-psychotic emotions. In only one case was an acquaintance unable to recognise all the emotional changes reported by the participant.

The tendency for a sequence of different emotions to be experienced over the course of the PPP is consistent with previous studies that have examined pre-psychotic symptomatology (Docherty et al., 1978; Haefner et al., 1992; Stanton & David, 2000; Varsamis & Adamson, 1971; Yung & Jackson, 1999; Yung & McGorry, 1996b). This literature indicates that the PPP is best described as a process of changing symptomatology over time and that a variety of both positive and negative emotions tend to occur during this time (Yung & McGorry, 1996a).

Although all the participants experienced a variety of different emotions over the course of the PPP, all of them identified one emotion that dominated their experiences during the PPP. This emotion was identified by the participants as being the one they either experienced the most during this time, had the most influence over their behaviour, or both. It is of note that the dominant emotion reported by each participant was often the first emotion they experienced during this time. The tendency for one emotion to dominate a person's experiences during the PPP does not appear to have been directly commented on in the literature and may offer researchers new insights into the nature of emotional experiences during this time. One possible interpretation of this finding is that there may be an over arching emotional theme to a person's PPP that is represented by the dominant emotion. This idea is similar to Bleuler's (1911) concept of mood colourings and the belief that strong emotions experienced during psychotic episodes form a backdrop that

influences the expression of all other psychotic symptoms that are experienced (McKenna, 1994). Further research is required to examine this hypothesis.

Experiencing Negative Emotional Changes

Negative emotions were found to be a common feature of both the participants' and their acquaintances' accounts of the PPP. Related to this finding is the participant theme 'unpleasant emotional changes' and the acquaintance theme 'the emergence of a new emotionality' and its sub-category 'negative emotional changes'. Negative emotional experiences reported during the PPP in the present study were depression, anxiety, anger, and guilt. Three main findings related to the experiential nature of these negative emotions were drawn from the research data.

First of all, negative emotional experiences were found to be prominent features of the PPP. All of the participants reported experiencing strong negative emotional experiences during this time. Depression was the most common emotion reported and was experienced by 11 participants. Anxiety was the next most common and was reported by five participants. Anger was experienced by four of the participants during the PPP and only one participant reported feelings of guilt during this time. In addition to being commonly experienced during the PPP, negative emotions also tended to dominate the participants' experiences during this time. Once again, depression was the most commonly reported dominant emotion and was identified by seven participants. Anxiety was the next most common and was reported by three participants. Neither anger nor guilt was identified as the dominant emotion by any of the participants.

The tendency for negative emotional experiences to be prominent features of the participants' pre-psychotic experiences is consistent with the literature in this area. Previous research has often shown that, not only are negative emotions, in particular depression and anxiety, highly prevalent during the PPP (an der Heiden & Haefner, 2000; Tan & Ang, 2001; Turnbull & Bebbington, 2001; Yung & McGorry, 1996a), they have also been closely associated with the onset of psychosis (Birchwood & Iqbal, 1998; Freeman & Garety, 2003; Jones et al., 1994; Krabbendam et al., 2002; Poulton et al., 2000).

A second finding related to the negative emotional changes that were reported during the PPP, was that they did not appear to have any experiential features that would make them unique to the onset of psychosis. When the participants' and their acquaintances' accounts of these negative emotions were examined in detail they were found to present with a range of cognitive, physiological, and behavioural features that would be usually associated with their onset and presentation (Weiten, 1995). For example, the participants' experiences of depression were associated with anhedonia, suicidal ideation and behaviour, low self esteem, feelings of guilt and wrongdoing, and a sense of loneliness. Associated with the participants' feelings of anxiety was a sense of danger, heightened physiological arousal, and hypervigilant behaviour. The participants also described using a range of 'safety behaviours' as a means of protecting themselves from perceived dangers (Wells, 2000). These behaviours included breaking off friendships, moving residence, affixing extra locks to doors, carrying weapons, and avoiding public places. Finally, the participants' feelings of anger were associated with a sense of being treated unfairly and acts of verbal and physical aggression. The source of

the participants' anger tended to be their family and other loved ones. It is of note that social withdrawal was closely associated with all of these negative emotions during the PPP.

The tendency for negative emotional experiences to present no differently during the PPP than how they would present in the general population supports a recent claim by Freeman and Garety (2003) that the emotional disturbances that occur during the PPP are not pathognomic to the onset of psychosis. After reviewing the research exploring the relationship between emotional disturbances and the development of psychosis, these researchers concluded that the onset of psychosis likely involves a range of common emotional changes, in combination with a number of psychological processes unique to the onset of psychosis (Freeman & Garety, 2003). These include biased conscious appraisal processes such as jumping to conclusions, externalising attributional biases, theory of mind deficits, and a lack of belief flexibility. These biases have been shown to contribute to the judgment that inner experiences, such as anomalous experiences, have an external cause and are personally significant to the person (Garety & Freeman, 1999).

The final finding that can drawn from the data, related to the nature of negative emotional experiences during the PPP, was a tendency for feelings of paranoia and persecutory beliefs to develop alongside the participants' experiences of anxiety. Associated with feelings of anxiety, the participants often reported vague ideas of being followed or watched; that people were talking behind their back; or even feelings that other people were trying to trap them. For two of the participants, as the PPP progressed and the feelings of anxiety persisted, these paranoid ideas became more entrenched and more direct interpretations of hostility from others emerged. The acquaintances also described a

relationship between anxiety and paranoia during the PPP. Under the category of 'the emergence of delusion-like ideas' they reported an association between increases in negative affect, in particular anxiety, and the development of paranoid ideas during this time.

The association between pre-psychotic experiences of anxiety and the development of paranoid and persecutory phenomena found in the present study is consistent with other studies in this area (Gaylinker et al., 1996; Penn et al., 1994; Sandberg & Siris, 1987; Slade, 1976) and supports a recently developed model of persecutory delusions proposed by Daniel Freeman, Philippa Garety, and their colleagues (2002). The link between anxiety and paranoid phenomena has often been attributed to the fact that both of these experiences are associated with a sense of vulnerability and the anticipation of danger (Freeman et al., 2002). In addition to this, these phenomena have been shown to share similar etiological factors (Chadwick et al., 1996; Freeman & Garety, 2002). These include biases in information processing that result in the interpretation of ambiguous situations as threatening; the use of safety behaviours that prevent the gathering of evidence that disconfirms the anticipation of danger, and the presence of meta-cognitive beliefs associated with worrying about not having control over ones thoughts. As well as adding support to the research in this area, the present findings suggest that the development of paranoid and persecutory ideas occurs gradually over the course of the PPP and that these phenomena may be a feature a persons experiences during this time.

Experiencing Positive Emotional Changes

Another main finding that emerged from the present study relates to the participants' experiences of positive emotional experiences during the PPP. These experiences are represented by the participant theme 'pleasant emotional changes' and the acquaintance theme 'the emergence of a new emotionality' and its sub-category 'positive emotional changes'. In total, four of the participants experienced positive emotions during the PPP and two of these participants reported these emotions dominating their experiences during this time. These emotions were described by the participants as feelings of love and happiness. These feelings were commonly associated with a sense of contentment and connectedness with others and behaviour that was overly affectionate and unpredictable. Reflecting back on the positive emotions the participants experienced during the PPP, they had difficulty attributing the onset of these emotions to positive environmental events. The origin of these emotions was often described as endogenous. Overall, positive emotions were found to mostly occur during the first part of the PPP and tended to ameliorate over time. The decrease in positive affect over the course of the PPP tended to be related to the build of distress over time.

Previous research examining positive emotional experiences during the PPP is sparse. Although a number of researchers have suggested that these emotions are features of this state and may play a role in the development of psychosis up until now they do not seem to have been examined in-depth (Freeman & Garety, 2003; Yung & McGorry, 1996b). In the past, these experiences have been categorised under broad headings such as "mood swings" (Yung & McGorry, 1996b, p. 359) and "inappropriate affect" (American Psychiatric Association, 1987, p. 195). The present findings add to this body of literature

by confirming that positive emotional experiences are indeed features of the PPP for some people. In addition to this, feelings of love and happiness were identified as two specific types of positive emotions that can be experienced during this time. The finding that positive emotions tended to occur during the first part of the PPP and ameliorate over time is also novel and adds to the corpus of knowledge in this area.

Experiencing the Build of Distress Over Time

A final finding that was drawn form the present study, related to the experiential nature of emotional experiences during the PPP, was the tendency for there to be an increase in emotional distress over the course of the PPP. This is represented by the participant theme 'becoming progressively worse' and the acquaintance theme 'stress building up over time'. Over the course of the PPP the participants reported becoming progressively more distressed. In particular, they reported an increase in negative emotions, such as depression, anxiety, and anger, over the course of the PPP and a corresponding decrease in positive affect during this time. Along side the participants' accounts of distress, the acquaintances described witnessing an increase in stress and pressure in the participants during the PPP. They too reported a decrease in positive emotions and increase in negative affect during this time. The increasing levels of distress experienced by the participants over the course of the PPP was found to have a deleterious effect on their adaptive functioning and resulted in them becoming more socially isolated. This process appeared to continue throughout the PPP, and strong negative emotions and feelings of distress were often found to immediately precede the onset of florid psychotic symptoms.

The tendency for there to be an increase in emotional distress over the course of the PPP is consistent with previous research in this area and experiential accounts of the PPP which have shown that emotional distress tends to escalate over the course of the PPP and is closely related to the onset of psychosis (Chadwick, 2001; Mclean, 2003; Parnas et al., 1998; Roberts, 1992; Yung & Jackson, 1999; Yung & McGorry, 1996b). Researchers have also highlighted the general decrease in adaptive functioning that occurs during this time (Yung & Jackson, 1999).

Two factors were identified by the participants as being associated with the increase in their distress over the course of the PPP. The first of these factors is represented by the theme, 'the stressful world'. All of the participants identified stressful life events that were central to their experiences of the PPP. These were categorised as either: major life changes and transitions; educational or vocational failure; exposure to abuse; or interpersonal conflict. The participants tended to attribute these life events to the onset and perpetuation of their negative emotional experiences during the PPP and the escalation in their distress over time. In these instances the participants described a feedback loop developing between these life events and their emotional distress. Consistent with the participants' experiences, the acquaintances also attributed the increase in the participants' distress over the course of the PPP to adverse life events. Specific life events identified by the acquaintances included bullying, difficulties at school or work, and interpersonal conflict. Although it is possible that some of the stressful life events experienced by the participants during the PPP may have developed in part as a consequence of the personal changes they experienced during this time, this idea was refuted by the participants.

The link between adverse life events and an increase in emotional distress over the course of the PPP found in the present study is consistent with recently developed traumagenic models of psychosis (Bebbington et al., 2004; Freeman et al., 2002; Garety et al., 2001; Muesser et al., 1998; Neria et al., 2002; Read, Perry, Moskowitz, & Connolly, 2001). Specific life events that were described by the participants which have also been associated with the onset of psychosis include experiences of abuse and victimization (Birchwood et al., 2000; Fowler, 1999; Holowka et al., 2003; Read et al., 2003), conflict within the family and with loved ones (Bentall, 2003; Brown, Monck, Carstairs, & Wing, 1962) and difficulties associated with moving to another country (Bhugra et al., 1997). Obviously, it is beyond the scope of the present study to comment on the direction of the relationship between stressful life events, emotional distress, and the development of psychosis. However, a general finding that can be drawn from this data is that, from the perspective of the participants and those who were with them during this time, stressful life events are a salient feature of the PPP and closely associated with the onset and perpetuation of emotional distress during this time. This finding is consistent with research which has shown that people experiencing psychosis and their families tend to highlight environmental rather than biological or genetic explanations for their psychosis (Read, Haslam, Sayce, & Davies, in press). Variables that have been identified by this population as causing psychosis include adverse environmental events (Van Dorn, Swanson, Elbogen, & Swartz, 2005) and conflict within the family (Angermeyer & Klusmann, 1988).

The second factor that was identified by the participants as being closely associated with the build up of distress over the course of the PPP was the ongoing confusion they experienced during this time. This is represented by the participant theme ‘being

confused' and also the acquaintance theme 'a state of confusion'. All of the participants reported experiencing confusion during the PPP. In particular, they described having difficulty making sense of the changes they were experiencing and difficulty describing the nature of these changes to others. For some of the participants their sense of confusion, in combination with the negative emotional changes and stressful life events they experienced during this time was the most distressing aspect of the PPP for them. In response to the confusion, the participants described searching for an explanation for what was happening to them. The most common means by which the participants did this was by making changes in their lives and daily patterns of living. For example, moving to different towns and adopting new religions. Generally, the participants reported little success finding an explanation for the changes they were experiencing during the PPP and described ongoing confusion during this time. The acquaintances' also described experiences of confusion during the PPP. They not only commented on the confusion they observed in the participants, but also reported becoming confused themselves in response to witnessing the participants' confusion.

The close relationship between ongoing confusion and increasing emotional distress found in the present study is generally consistent with the literature in this area. It has long been acknowledged that confusion and perplexity are key features of the PPP (Freeman et al., 2002; Lapidus & Schmolling, 1975; Parnas et al., 1998). In particular, experiences of confusion and an associated drive to understand ones experiences has long been associated with the development of delusional beliefs (Roberts, 1991) and is a key feature of Jaspers (1913/1963) account of delusional atmosphere. In addition to supporting this research, the present findings suggest that confusion is experienced by those around

the person as well during the PPP. At least for some people, confusion may become a part of their social environment and a key feature of their interactions with others during this time.

The Features of Delusional Atmosphere That are Consistent With the Emotional Changes That Occur During the PPP

The second question posed by the present study was: what features of delusional atmosphere are consistent with experiential accounts of the emotional changes that occur during the PPP. To address this question the present findings were compared with the conceptual summary of delusional atmosphere offered in chapter five (table 5). This summary identified three components of delusional atmosphere. They are a spatial component, an affective component, and a temporal component. Overall, a number of similarities between the pre-psychotic emotional experiences and the concept of delusional atmosphere were found. Before these are discussed it is important to note that although the process of comparing the participants' experiences of the PPP with the concept of delusional atmosphere could be considered a piece of data analysis, and therefore best discussed in the results section of this thesis, this comparison was made in retrospect, after all the research data had been collected and interpreted. Therefore this piece of work is more accurately situated in the discussion section of this thesis.

The Spatial Component of Delusional Atmosphere

The spatial component of delusional atmosphere refers to the environment feeling different and subtly altered – enveloped in a "pervasive and strangely uncertain light"

(Jaspers, 1913/1963, p. 98). In this state everything appears imbued with possible new meanings. It was hypothesised that derealisation – feelings that ones customary environment or friends and family are strange, unfamiliar, or unreal – is a feature of this state. A theme that emerged from the participants' narratives of the PPP that appears to be consistent with this component of delusional atmosphere is 'experiencing the world differently' and its sub-category 'changes in the way the environment felt'. Half of the participants in the present study experienced vague changes in the way the environment felt during the PPP, often finding the specific nature of these changes difficult to define. Descriptions of these changes included feeling as though things were not going the way they were meant to and the environment feeling strange. These experiences were often associated with a changing sense of connectedness with the world and others. While some of the participants reported feeling more connected to the world around them others reported feeling more cut off from the world. When these experiences were analysed in detail the majority of them could be categorised as instances of either *déjà vu*— an inappropriate sense of familiarity— or *jamais vu*—an inappropriate absence of familiarity. The most common of these experiences was *jamais* vu. For example, one participant found his bedroom uncomfortable to be in and resorted to sleeping in another room in the house. It is of note that the participants' experiences of *jamais vu* bear a resemblance to the concept of derealisation and in particular the feeing that ones customary environment or friends and family are strange or unfamiliar. However, another feature of derealisation, a sense that ones environment feels unreal, was not found to be a feature of the participants' emotional experiences during the PPP.

In conclusion, some aspects of the spatial component of delusional atmosphere were evident in the participants' accounts of the PPP. Half of the participants in the present study had experiences associated with the environment feeling different and subtly altered. Experiences of derealisation were also evident during this time. However, the environment being imbued with possible new meanings and feeling unreal was not reported by the participants.

The Affective Component of Delusional Atmosphere

The affective component of delusional atmosphere refers to an 'uncanny' and uncomfortable feeling, characterised by anxiety, perplexity, confusion, and uncertainty as to what is different in the environment and what this change(s) portends. A number of themes emerged from the data corpus that are consistent with this component of delusional atmosphere. As described in the previous section both anxiety and confusion were found to be features of the PPP in the present study. Anxiety was experienced by approximately half of the participants and confusion was a feature of both the participants and acquaintances narratives of the PPP. The feelings of confusion described by the participants were associated with the difficulties they had making sense of the changes they were experiencing. This led to an escalation in negative affect and distress over time, including increasing levels of anxiety. Also, consistent with this component of delusional atmosphere the participants described being uncertain as to why they were experiencing these changes. The participant's reported spending a considerable amount of time and energy trying to understand what was happening to them and searching for an explanation

for the changes. For example, one participant described lying awake at night thinking about the changes he was experiencing and wondering why they were happening.

In conclusion, the present findings appear to be generally consistent with the affective component of delusional atmosphere. The participants' experiences of anxiety, confusion, and their drive to find and explanation for the changes they were experiencing are particularly relevant o this component of delusional atmosphere. However, it is also important to note that in addition to anxiety, the participants experienced a variety of other negative emotions during the PPP. These included depression, anger, and guilt. In the future it may be useful to investigate whether these other emotions should also be included in the affective component of delusional atmosphere along side experiences of anxiety.

The Temporal Component of Delusional Atmosphere

The temporal component of delusional atmosphere describes a sense of apprehension and an almost unbearable tension that something terrible (or just important) is going to happen, and not knowing what it will be. Congruent with this component of delusional atmosphere is the participant theme 'sensing something significant was going to happen'. This theme was evident in five of the participants' accounts of the PPP and is characterised by a strong sense that something significant was going to happen, but not being sure what this was going to be. Most of the participants predicted the occurrence of negative events and this experience was associated with considerable emotional distress. One participant described this as a sense of impending doom. Others reported thinking they were going to die or that their family was going to abandon them. Only one participant predicted the occurrence of a positive event, sensing that he was going to be

famous. On reflection, one participant concluded that for him the sense of something significant happening arose from his belief that the changes he was experiencing must have been occurring for a reason and not knowing what that reason was.

In conclusion, the temporal component of delusional atmosphere was found to be a feature of the PPP for a number of participants in the present study. These participants tended to predict negative events happening and emotional distress was a feature of this experience. Based on the present findings it is possible to hypothesise that in some instances a sense that something significant is going to happen may arise from a belief that the manifold changes one experiences during the PPP are occurring for a reason and making attempts to predict what this reason is.

Limitations

In keeping with the foundations of interpretative phenomenological analysis, the present study was not designed to offer a complete or final interpretation of emotional experiences during the PPP. This study had an exploratory purpose and aimed to offer an in-depth exploration of emotional experiences during this time and to examine whether they were consistent with the concept of delusional atmosphere. In qualitative studies such as this the researcher is an active agent in the research process and the values, assumptions, and previous experiences they bring to the study inevitably influence the way the data is collected, analysed, and interpreted (Henwood & Pidgeon, 1992). Unlike the findings of quantitative studies, the generalisability of the present findings cannot be assessed using statistical measures, rather they should be considered 'working hypotheses' that reflect situation-specific conditions in a particular context (Cronbach, 1975). Accordingly, they

should be judged as to whether they are representative of the population under investigation and transferable to other instances of similar behaviour (Guba & Lincoln, 1989). The population represented in the present study was young New Zealand men, predominantly of European decent, receiving community based treatment for first episode psychosis. Populations that are not represented by the research findings include females and people experiencing first episode psychosis later in life. It would also be important to limit the application of these findings to cultures and other demographic groups not represented in the present sample.

Two factors can be identified that may limit the generalisability of the present findings to the target population. First of all, the research sample was self-selecting and only included people being treated for their psychosis. Accordingly, the sample is likely to over-represent people who are willing to receive therapy for their psychosis and under-represent people who do not want to receive therapy or do not have access to such care. Likewise, the present sample may over-represent people who had particularly strong or unique experiences during the PPP and were motivated to speak about them and under-represent people with minimal or no emotional changes during the PPP. Related to this issue, it is likely that the five participants who were receiving psychotherapy for their psychosis may have been more open and aware of their emotional experiences during the PPP and more versed at verbalizing these experiences to others. The participants' acquaintances were also self-selecting and their sampling may have also been influenced by the similar factors. Overall, it is possible that the use of a different sampling technique that involved randomly selected participants may have led to different findings.

Secondly, there are limitations associated with using a retrospective research design. It has been suggested that because the research participants in such studies are often experiencing psychosis when the data is being collected their accounts of the PPP may not be isomorphic with the events of which they speak (Osborne & Coyle, 2002). Problems may arise from memory distortions or recall biases. Psychotic symptoms such as delusions and hallucinations can also impact on the interview process and restrict the type of questions that can be asked. In addition to this, using direct questioning to examine specific topics of inquiry, in particular delusional atmosphere, may have led to positive response biases. As a result of these issues, the emotional changes reported by the participants in the present study may not be a complete account or totally representative of their experiences during the PPP. However, it would be remiss to assume that the autobiographical memory and retrospective accounts of people experiencing psychosis are totally inaccurate or unstable. A number of researchers have highlighted that retrospective accounts of self-experiences (Blane, 1996; Neisser, 1994) and self-report accounts of the PPP (Birchwood, 1996) are generally accurate. Two techniques were used to improve the quality and detail of data collected about the PPP in the present study. First of all, data regarding observable changes in the participants' behaviour during the PPP was gathered from an acquaintance of the participant who had regular contact with them during this time. This technique has been shown to produce more accurate and detailed information about the PPP than what can be gathered from participant interviews alone (American Psychiatric Association, 1987, 1994; Beiser et al., 1993; Birchwood, 1996; Yung & Jackson, 1999). Secondly, during the interview process funnelling techniques were used to introduce areas of inquiry not already addressed by the participant, such as delusional

atmosphere. This technique involves beginning the interview with general open-ended question that introduce the topic of inquiry and placing more specific questions at the end of the interview (Merriam, 2002). This technique is less likely to produce responses biased in the direction of preparatory hypotheses or specific areas of interest (Smith & Osborn, 2003).

Recommendations for Further Research

The present study involved the detailed analysis of emotional experiences during the PPP and had an exploratory purpose. It is suggested that the findings of this study are used as a base from which larger scale studies can be conducted that use larger, more diverse researcher samples and employ quantitative methods of inquiry. The aim of such studies would be to further investigate and the experiential themes and conceptual relationships found in the present study. Of particular interest would be to examine the presence of the emotional experiences identified in the present study across a larger research sample. The frequency and course of these emotions during the PPP may be of particular interest to researchers in this area. Another avenue of inquiry could be to explore the predominance of different types of emotional experiences during the PPP and to examine whether there is indeed a tendency for one particular emotion to influence the content of all other pre-psychotic experiences during this time. Larger scale, quantitative studies could also be conducted to further investigate what features of delusional atmosphere are evident during the PPP, prior to the onset of a variety of different psychotic symptoms and disorders. The present study recruited a sample of people that were experiencing delusions along with a variety of different psychotic symptoms. It may be

useful to examine the pre-psychotic emotional changes in a group of people experiencing a specific type of psychotic phenomena or symptom. For example, examining the similarities between the concept of delusional atmosphere and the pre-psychotic experiences of a group of people diagnosed with delusional disorder may be of particular interest to researchers in this area. The three-component definition of delusional atmosphere used by the present study could be employed in such studies.

Another suggestion for future research is to conduct a study aimed at addressing similar questions posed by the present study, but using a prospective research design. This would overcome the difficulties associated with relying on retrospective data. Such a study would involve following a sample of people at risk of psychosis over a long period of time, up until the development of florid psychotic features. In conducting such a study it may be useful to track the co-occurrence of various emotions and stressful life events during this time, along with the participants' attitudes and beliefs regarding these changes. It would also be useful to further examine the link between various pre-psychotic emotional experiences and the content of subsequent psychotic symptoms. An examination of this relationship would require a study that tracks people's experiences throughout the PPP and after the onset of florid psychotic features.

Recommendations for Clinicians

In relation to clinical practice the findings of the present study highlight the centrality of strong emotional experiences during the PPP. Clinicians working in this area have the opportunity to use the themes and conceptual relationships identified in the present study as a reference when formulating and understanding their clients' emotional

experiences during this time. They may also want to use these themes to educate their clients on the different types of emotional experiences people can have during the PPP. The present findings also add to the growing body of clinical literature aimed at identifying the core features of the PPP and people at risk of developing psychosis. Of particular interest to researchers in this area may be the variety of both positive and negative emotions that were experienced by the participants during the PPP. The tendency for negative emotional experiences to predominate a person's experiences during this time and for there to be a build up of distress over the course of the PPP may also be of interest to clinicians working in this area. In particular, the build up of distress was closely related to the occurrence of adverse life events and the participants' ongoing feelings of confusion. It is also of note that the participants' own confusion often led those around them to become confused. This finding may be of particular interest and value to clinicians working with people experiencing psychosis and their families. Addressing issues around confusion may be a useful engagement tool and possible early intervention strategy for this population when they first present to a clinician.

The present study also suggests that some features of delusional atmosphere may be of clinical value when conceptualising a client's experiences of the PPP. These aspects of delusional atmosphere include: experiences of derealisation and of the environment feeling different and subtly altered; experiences of anxiety, confusion, and a drive to find and explanation for the changes that are being experienced; and a sense of apprehension and tension that something terrible (or just important) is about to happen.

Finally, the present findings support the usefulness of intervening during the PPP to manage the emotional distress and confusion that is experienced during this time. Well

researched cognitive-behavioural techniques for managing anxiety (Wells, 2000) and anger (Kassinove & Sukhodolsky, 1995), as well as depression and low self-esteem (Greenberger & Padesky, 1995) may be of particular use to clinicians in this area. This idea is supported by a recent study by Morrison and colleagues (2004) who monitored 58 people who were deemed to be at a very high risk of developing psychosis over a one year period. Using a randomised controlled trial these researchers found that cognitive therapy significantly reduced the likelihood of making the progression to psychosis.

Summary

The purpose of the present study was to examine in detail emotional experiences during the pre-psychotic period (PPP). A number of findings were drawn from the research data. These were discussed in relation to the previous literature in this area. First of all, it was found that there was a general change in the participants' emotionality during the PPP. The emotional changes reported during this time were described as intense and uncontrollable. These changes were difficult for those around the person to describe and there was an unawareness that these changes would lead to psychosis.

Secondly, there was a tendency for a sequence of different emotional changes to occur over the course of the PPP. The sequence of emotions reported by each participant varied. In addition to this, it was found that there tended to be one emotion that dominated the person's experiences during the PPP. This emotion was identified by the participants as being the one they experienced the most during this time, had the most influence over their behaviour, or both. One possible interpretation of this finding is that there may be an

over arching emotional theme to a person's PPP that is represented by the dominating emotion.

Thirdly, negative emotions were found to be prominent features of the PPP. Depression was the most commonly reported emotion, followed by anxiety, anger, and then guilt. Negative emotions, in particular depression and anxiety, also tended to dominate the participants' experiences of this time. When these negative emotions were examined in detail it was found that they presented no differently during the PPP than how they would in the general population. A link between pre-psychotic experiences of anxiety and the development of paranoid and persecutory phenomena was also found in the present study.

Fourthly, positive emotional experiences, namely love and happiness were found to be a feature of the PPP for a small group of people. These emotions were found to mostly occur during the first part of the PPP and tended to ameliorate over time. In general, the participants found it difficult to associate these emotions with positive environmental events. The origin of these emotions was often described as endogenous.

Fifthly, there tended to be an increase in emotional distress over the course of the PPP. Two factors were identified by the participants as being associated with this increase in distress. These were the occurrence of adverse life events and the ongoing confusion they experienced during the PPP. Confusion was also experienced by those close to the person during this time. In response to the confusion, the participants often made attempts to find explanation for the changes they were experiencing. These attempts were often unsuccessful though.

Finally, a number of similarities were found between the pre-psychotic emotional experiences reported by the participants in the present study and the concept of delusional atmosphere. In relation to the spatial component of delusional atmosphere, half of the participants reported the environment feeling different and subtly altered during the PPP. Experiences of derealisation were also evident during this time. Consistent with the affective component of delusional atmosphere the participants described anxiety and confusion and a drive to find and explanation for the changes they were experiencing. It is important to note that in addition to anxiety, a variety of other negative emotions were found to occur during the PPP, before the onset of delusions. These included depression, anger, and guilt. In the future it may be useful to investigate whether these emotions should also be included in the affective component of delusional atmosphere. Finally, a number of participants reported a sense that something significant was going to happen and not knowing what it will be. These experiences are consistent with the temporal component of delusional atmosphere.

In keeping with the foundations of interpretative phenomenological analysis, the present study was not designed to offer a complete or final interpretation of emotional experiences during the PPP; rather this study had an exploratory purpose. The findings of this study should be considered working hypotheses that reflect situation-specific conditions in a particular context. Accordingly, they should be judged as to whether they are representative of the population under investigation and transferable to other instances of similar behaviour. Two factors were identified that may limit the generalisability of the present findings to the target population. These were associated with the self-selecting nature of the research sample and the use of a retrospective research design.

It is suggested that the present findings are used as a base from which larger scale quantitative studies can be conducted. The aim of such studies would be to further examine the themes and conceptual relationships found in the present study. It may also be useful to conduct a study aimed at addressing similar questions posed by the present study, but using a prospective research design. This would overcome the difficulties associated with relying on retrospective data. In relation to clinical practice the research findings highlight the centrality of strong emotional experiences during the PPP. Clinicians working in this area have the opportunity to use the themes and conceptual relationships identified in the present study as a reference in formulating and understanding their clients' emotional experiences during the PPP, as well as educating their clients on the different types of emotional changes that can occur during the PPP. The present findings also add to the growing body of clinical literature aimed at identifying the key features of the PPP in order to help identify people at risk of developing psychosis.

APPENDIX A

Current Circumstances Questionnaire

This questionnaire asks you to provide some information about your background and current living circumstances. If you do not want to answer any question, just put an "X" in the space. If you need more space for your answer, use the other side of the page, and indicate the number of the question being answered.

General

1. Are you? ☐ Female ☐ Male

2. What is your date of birth? _____

3. Who is your case manager? _____

4. Which ethnic groups do you most identify with?

☐ NZ European/Pakeha ☐ Polynesian/Pacific Islander

☐ Other European ☐ Asian

☐ Other (please state) ☐ Maori

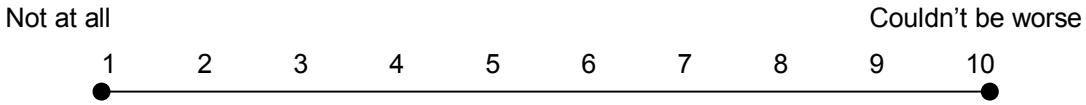
Iwi/Hapu: _____

5. When did your psychosis begin?

_____

_____

6. In general how much does your psychosis bother you?



7. Have you ever attempted suicide? ☐ Yes ☐ No

If **yes**, when?

_____

_____

_____

8. Have you ever been seen by a mental health professional before you were diagnosed with psychosis ☐ Yes ☐ No

If **yes**, what were you treated for:

☐ an anxiety disorder (e.g. social phobia, obsessive compulsive disorder, panic disorder, agoraphobia, posttraumatic stress disorder)

☐ a mood disorder (e.g. depression, bipolar disorder, dysthymia)

☐ a drug or alcohol related disorder

☐ a personality disorder (e.g. borderline, antisocial personality disorder)

☐ an eating disorder (e.g. anorexia nervosa, bulimia, binge eating disorder)

☐ a dissociative disorder (e.g. dissociative identity disorder,depersonalisation disorder)

Family

9. What is your marital status?

☐ never married ☐ currently married or living with partner

☐ separated / divorced ☐ widowed

10. Do you have children? ☐ Yes ☐ No

If **yes**, please indicate the gender and age(s) of your child(ren)

11. How many of your children live with you now?

12. Besides your spouse or partner & children, do you live with any other people? ☐ Yes ☐ No

If **yes**, please indicate how many people, and their relationship to you.

Other Personal Background

13. What is the highest level of education you completed?

☐ primary school ☐ up to form 5

☐ form 6 or 7 ☐ tertiary degree or diploma

☐ postgraduate degree or diploma

14. What is your usual occupation?

_____

_____

15. Are you currently employed? ☐ Yes ☐ No

APPENDIX B

Interview Schedule (Clients)

Introduction

The aim of this part of the interview is to explore your emotional experiences before being affected by psychosis. It is really important that we cover the topics that are important to you and for you to talk about a topic as much as possible, and say whatever comes to your mind.

Before we start the interview it is important you understand your rights as a participant. You have the right to:

- Stop the interview at any time
- Ask questions at any time
- Not answer a question if you don't want to
- Receive a transcript of the interview for review
- Have your participation in the research kept confidential and the information you provide stored securely

Establishing when change was first noticed

- Describe the time, before developing psychosis, when you first realised something important had changed?

- Were there any changes before then, even ones, which might not seem that important?

Tracking the sequence and nature of these changes up to the emergence of psychotic symptoms

- I'd like to establish how these things changed over time and any other changes that have taken place.

- What happened next (after last change)? (Repeat this question until the emergence of psychotic symptoms)

Asking about changes associated with delusional atmosphere

- Did the environment feel strange or look any different than before?

- Did familiar places feel unfamiliar, or the other way around?
- Did you feel any confusion or uncertainty about things?
- Did you have a feeling that something important was going to happen?

Prompting for ideas not already elicited

- How would explain these changes to a person who has not experienced it?
- What did you think was going on?
- What was the most distressing aspect of this change?
- What ways did you attempt to cope with these changes?

Summary

- Let me see if I'm clear on what happened. You first realized something had changed (date) when you (describe behaviour)… and you began to…(complete description of changes).
- Have I missed anything out?

APPENDIX C

Interview Schedule (Acquaintances)

Introduction

The aim of this part of the interview is to explore the emotional changes you saw in (participant's name) before he/she was affected by psychosis. It is really important that we cover the topics that are important to you and for you to talk about a topic as much as possible, and say whatever comes to your mind.

Before we start the interview it is important you understand your rights as a participant. You have the right to:

- Stop the interview at any time
- Ask questions at any time
- Not answer a question if you don't want to
- Receive a transcript of the interview for review
- Have your participation in the research kept confidential and the information you provide stored securely

Establishing when change was first noticed

- Describe the time, before (participant's name) developed psychosis, when you first realised something important had changed?

- Were there any changes before then, even ones, which might not seem that important?

Tracking the sequence and nature of these changes up to the emergence of psychotic symptoms

- I'd like to establish how these things changed over time and any other changes that have taken place.

- What happened next (after last change)? (Repeat this question until the emergence of psychotic symptoms)

Prompting for ideas not already elicited

- During this period how do you think he/she felt?

- Did s/he seem suspicious or say/do strange things?
- What did you think was going on?
- What was the most distressing aspect of this change for you?
- What do you think was the most distressing aspect of this change for (participant's name)?

Summary

- Let me see if I'm clear on what happened. You first realised something had changed (date) when s/he (describe behaviour)… and then s/he began to…(complete description of changes).
- Have I missed anything out?

APPENDIX D

Clinical Information Questionnaire

General:
How long has this person been a client of your service?

☐ Less than 1 month ☐ 1-3 months ☐ 3-6 months

☐ 6-12 months ☐ 1-2 years ☐ more then 2 years

Diagnosis:

	Yes	**No**
Does this person have a current diagnosis of a psychotic disorder?	☐	☐

If **yes** which diagnosis?

☐ Schizophrenia ☐ Schizophreniform Disorder

☐ Schizoaffective Disorder ☐ Delusional Disorder

☐ Brief Psychotic Episode ☐ Shared Psychotic Disorder

☐ Psychotic Disorder Not Otherwise Specified

Could you please identify the psychotic symptoms this person experiences and briefly describe the nature of these symptoms?

☐ Delusions:_____

_____

_____

☐ Hallucinations:_____
_____
_____

☐ Disorganized speech:_____
_____
_____

☐ Disorganized or catatonic behaviour:_____
_____
_____

☐ Negative symptoms (i.e. affective flattening, alogia, or avolition), and thought disorder:
_____
_____
_____

	Yes	**No**
Does this person have any additional diagnoses?	☐	☐

If **yes**, please list additional diagnoses, and date of each diagnosis

1.

2.

3.

Treatment:

	Yes	No
Is this person receiving any medication for psychosis?	☐	☐

If **yes**, please list the medication(s).

1.

2.

3.

Is this person currently receiving any psychotherapy for psychosis?	☐	☐

If **yes**, please indicate the primary treatment type

☐ Supportive counselling ☐ Psychodynamic

☐ Cognitive behavioural therapy ☐ Family therapy

☐ Other (please state):

Are there any other comments relevant to this person's current diagnosis or treatment you wish to make?

_____

_____

_____

APPENDIX E

Emotional Experiences Before Psychosis

Participant Information Sheet

(Client)

Who are the researchers

My name is Peter Watts. I am currently undertaking a research project towards a Doctor of Clinical Psychology Degree. My supervisor is Dr Andrew Moskowitz, who is a Lecturer at the University of Auckland.

What is the study about

You are invited to take part in a study where you and one of your family, whanau, or friends will be asked to talk about the time before you were affected by psychosis, when you first realised something important had changed in your life or your self. Very little research has focused on the changes people feel during this time and how they look to others, so this is quite an important area of study.

Participation in the Research

Your clinical psychologist or case manager has been asked to give this information sheet to people experiencing psychosis who may be interested in participating in this study. I am seeking up to 15 suitable candidates to become involved in this study.

Your participation is entirely voluntary (your choice) and you will be given time to decide whether you want to or not. Whether you participate or not, or even if

change your mind after first agreeing to participate will in no way affect your continuing healthcare.

If you do agree to take part in the study you can withdraw from the study at any time, decline to answer any questions you may be asked, and even after being interviewed can decide that you don't want your information used in the research project, as long as you make that decision within 7 days of the initial interview.

This study is not intended to treat you in any way. Your participation in the study would be for research purposes only. The costs for you participating in the study include your time and any associated travel costs.

What will the research involve

If you agree to take part in this study the research will involve one or two 1-hour interviews with me that will take place at a mutually convenient time. I will first ask you to fill out a short questionnaire about yourself and your family. I will then ask you to talk in-depth about the time before being affected by psychosis, when you first realised something important had changed in your life or your self. This part of the interview will be audio taped so that it can be transcribed later for research purposes.

At the end of the first interview you will be asked for the name of one of your family, whanau, or friends who might be willing to be interviewed separately about their perceptions of what happened to you during this time. It is important that this is someone who you feel close to, knew you best before the onset of your psychosis, and had regular contact with you during this time. I will contact these people myself and ask them if they are interested in taking part in the study.

A second interview may be required if we reach the end of the first interview but there is more to talk about. If this is the case together we will decide on a convenient time for a second interview to take place.

At the end of the interviews with both you and your family, whanau, or friend, a questionnaire will be sent to the your case manager or clinical psychologist. This questionnaire will ask this person for the date you were first seen by the agency, your current diagnosis, and other treatment details.

Once the audiotapes of your interview(s) have been transcribed you will be sent a copy of it. At this point you can to make comments and edit the transcript if there are mistakes. The researcher will make time to meet with you to record any changes you have made.

Here is a summary of what the research will involve:

- One introductory meeting with the researcher (5-10 minutes)
- Initial interview (up to 1 hour)

And if required

- Second interview (up to 1 hour)
- Meeting to make comments and edit the interview transcript (up to 30minutes)

Thus, the maximum time commitment required by you will be 2.5 - 3 hours.

Your rights

During the course of the study we may talk about personal and sensitive issues. For this reason, your identity will be protected throughout the study. I will conduct all the interviews myself and the information collected from you and your family, whanau, or friends will not be available to anyone other than my supervisor and myself. An exception to this would be if you disclosed information to me which indicated that you or someone else was at risk of serious harm. If this were the

case, other people might have to be informed to ensure your safety and the safety of others. Your case manger or psychologist will also be given feedback on the results of your participation in the study.

No material that could personally identify you will be used in any reports on this study. The audio tapes and transcribed copies of the interview will be kept in a secure place at the University of Auckland.

The following paragraph is required under ACC legislation. We do not foresee any circumstances that would result in physical injury from this research.

In the unlikely event of a physical injury as a result of your participation in the study, you may be covered by the ACC under the Injury Prevention Rehabilitation and Compensation Act. ACC cover is not automatic and your case will need to be assessed by ACC according to the provisions of the 2002 Injury Prevention Rehabilitation and Compensation Act. If your claim is accepted by ACC, you still might not get any compensation. This depends on a number of factors such as whether you are an earner or non-earner. ACC usually provides only partial reimbursement of the costs and expenses and there may be no lump sum compensation payable. There is no cover for mental injury unless it is a result of physical injury. If you have ACC cover, generally this will affect your right to sue the investigators. If you have any questions about the ACC, contact your nearest ACC office or the investigator.

If you have any queries or concerns regarding your rights as a participant in this study you may wish to contact a Health and Disability Advocate, telephone 0800 555 050.

The next step

If you are interested in participating or would like more information, please contact your case manager or Jeremy Clark at the Early Psychosis Intervention Centre who will arrange a time for us to meet. Together we will decide if participating is right for you. The phone number is (**) *** ****. If you leave your name and telephone number we will get back to you as soon as possible.

If you agree to participate I will ask you to read and sign a consent form, which will inform you of your rights as a participant in the study. I will then arrange a convenient time to interview you.

Alternatively, you can also contact my research supervisor Andrew Moskowitz through the department of psychology at the University of Auckland. His contact telephone number is (**) *** ****, extension ****.

Thank you very much for taking the time to consider joining the study.

Yours Sincerely

Peter Watts
(Principal Researcher)

This study has received ethical approval from the Auckland Ethics Committee.

APPENDIX F

Consent Form

Emotional Experiences Before Psychosis

(Clients)

Request for an interpreter:

English	I wish to have an interpreter.	Yes	No
Maori	E hiahia ana ahau ki tetahi kaiwhakamaori/kaiwhaka pakeha korero.	Ae	Kao
Samoan	Ou te mana o ia i ai se fa' amatala upu.	Ioe	Leai
Tongan	Oku ou fiema'u ha fakatonulea.	Io	Ikai
Cook Island	Ka inangaro au i tetai tangata uri reo.	Ae	Kare
Niuean	Fia manako au ke fakaaoga e taha tagata fakahokohoko kupu.	E	Nakai

I have read and understood the information sheet for volunteers taking part in a study which is designed to explore emotional experiences before psychosis. I have had this project explained to me and my questions have been answered to my satisfaction. I have had the opportunity to use family/whanau support or a friend to help me ask questions. I understand the study and have had time to consider whether to take part. I understand that I may ask further questions about the study at any time and know who to contact if I have any questions.

I understand that taking part in this study is voluntary (my choice). I understand that I can withdraw from the study at any time, decline to answer any particular

questions, and even after being interviewed can decide that I don't want my information used in the research project, as long as I make that decision within 7 days of the initial interview. I also understand that whether I participate or not, or even if I change my mind after first agreeing to participate will in no way affect my continuing healthcare.

I understand that my participation in the study is confidential. The information will be used only for this research and publications and seminars arising from this research project, and that no material which could identify me will be used in any reports on this study.

I understand I will not receive compensation for participating in the study. I understand that the study will be stopped if it should appear harmful to me and know whom to contact if I have any side effects to this study.

I consent to my interview being audio taped **YES/NO**

I agree to the researcher asking my clinician to confirm details of my diagnosis and treatment. **YES/NO**

I wish to receive a copy of the results **YES/NO**

I agree to my current mental health care provider being informed of the results of my participation in the study **YES/NO**

I _____ (full name) hereby consent to take part in this study

Signature: _____ Date: _____

Project explained by: Peter Watts
Principal Investigator

Signature: _____ Date: _____

_____

APPENDIX G

Emotional Experiences Before Psychosis
Participant Information Sheet

(Acquaintance)

Who are the researchers

My name is Peter Watts. I am currently undertaking a research project towards a Doctor of Clinical Psychology Degree. My supervisor is Dr Andrew Moskowitz, who is a Lecturer at the University of Auckland.

What is the study about

You are invited to take part in a study where you will be asked to talk about the time before (*participant's name*) was affected by psychosis, when you first realised something important about him/her had changed. Very little research has focused on the changes people feel during this time and how they look to others, so this is quite an important area of study.

Participation in the Research

(*Participant's name*) has nominated you talk about your perceptions of what happened to (*him/her*) during this time. I am seeking up to 15 suitable candidates and their family, whanau, or friends to become involved in this study.

Your participation is entirely voluntary (your choice) and you will be given time to decide whether you want to or not. Whether you participate or not, or even if change your mind after first agreeing to participate will in no way affect (*participant's name*)'s continuing healthcare.

If you do agree to take part in the study you can withdraw from the study at any time, decline to answer any questions you may be asked, and even after being interviewed can decide that you don't want your information used in the research project, as long as you make that decision within 7 days of the initial interview.

This study is not intended to treat (*participant's name*) in any way. Your participation in the study would be for research purposes only. The costs for you participating in the study include your time and any associated travel costs.

What will the research involve

If you agree to take part in this study the research will involve one or two 1-hour interviews with me that will take place at a mutually convenient time. During the interview I will ask you to talk in-depth about your personal perceptions of (*participant's name*) before being affected by psychosis, when you first realised something important had changed. The interview will be audio taped so that it can be transcribed later for research purposes.

A second interview may be required if we reach the end of the first interview but there is more to talk about. If this is the case together we will decide on a convenient time for a second interview to take place.

Once the audiotapes of your interview(s) have been transcribed you will be sent a copy of it. At this point you can to make comments and edit the transcript if there are mistakes. The researcher will make time to meet with you to record any changes you have made.

Here is a summary of what the research will involve:

- Initial interview (up to 1 hour)

And If required

- Second interview (up to 1 hour)
- Meeting to make comments and edit the interview transcript (up to 30minutes)

Thus, the maximum time commitment required by you will be 2.5 - 3 hours.

Your rights

During the course of the study we may talk about personal and sensitive issues. For this reason, your identity will be protected throughout the study. I will conduct all the interviews myself and the information collected from you and your family, whanau, or friends will not be available to anyone other than my supervisor and myself. The only exception to this would be if you disclosed information to me which indicated that you or someone else was at risk of serious harm. If this were the case, other people might have to be informed to ensure your safety and the safety of others.

No material that could personally identify you will be used in any reports on this study. The audio tapes and transcribed copies of the interview will be kept in a secure place at the University of Auckland.

The following paragraph is required under ACC legislation. We do not foresee any circumstances that would result in physical injury from this research.

In the unlikely event of a physical injury as a result of your participation in the study, you may be covered by the ACC under the Injury Prevention Rehabilitation

and Compensation Act. ACC cover is not automatic and your case will need to be assessed by ACC according to the provisions of the 2002 Injury Prevention Rehabilitation and Compensation Act. If your claim is accepted by ACC, you still might not get any compensation. This depends on a number of factors such as whether you are an earner or non-earner. ACC usually provides only partial reimbursement of the costs and expenses and there may be no lump sum compensation payable. There is no cover for mental injury unless it is a result of physical injury. If you have ACC cover, generally this will affect your right to sue the investigators. If you have any questions about the ACC, contact your nearest ACC office or the investigator.

If you have any queries or concerns regarding your rights as a participant in this study you may wish to contact a Health and Disability Advocate, telephone 0800 555 050.

The next step

If you are interested in participating or would like more information, please feel free to contact me through Jeremy Clark at the Early Psychosis Intervention Centre. The phone number is (**) *** ****. If you leave your name and telephone number along with the name of the person that nominated you for the study we will get back to you as soon as possible.

If you agree to participate I will then arrange a convenient time to interview. At the start of the interview I will ask you to read and sign a consent form, which will inform you of your rights as a participant in the study.

Alternatively, you can also contact my research supervisor Andrew Moskowitz through the department of psychology at the University of Auckland. His contact telephone number is (**) *** ****, extension ****.

Thank you very much for taking the time to consider joining the study.

Yours Sincerely

Peter Watts
(Principal Researcher)

This study has received ethical approval from the Auckland Ethics Committee.

APPENDIX H

Consent Form
Emotional Experiences Before Psychosis

(Acquaintance)

Request for an interpreter:

English	I wish to have an interpreter.	Yes	No
Maori	E hiahia ana ahau ki tetahi kaiwhakamaori/kaiwhaka pakeha korero.	Ae	Kao
Samoan	Ou te mana o ia i ai se fa' amatala upu.	Ioe	Leai
Tongan	Oku ou fiema'u ha fakatonulea.	Io	Ikai
Cook Island	Ka inangaro au i tetai tangata uri reo.	Ae	Kare
Niuean	Fia manako au ke fakaaoga e taha tagata fakahokohoko kupu.	E	Nakai

I have read and understood the information sheet for volunteers taking part in a study which is designed to explore emotional experiences before psychosis. I have had this project explained to me and my questions have been answered to my satisfaction. I have had the opportunity to use family/whanau support or a friend to help me ask questions. I understand the study and have had time to consider whether to take part. I understand that I may ask further questions about the study at any time and know who to contact if I have any questions.

I understand that taking part in this study is voluntary (my choice). I understand that I can withdraw from the study at any time, decline to answer any particular questions, and even after being interviewed can decide that I don't want my information used in the research project, as long as I make that decision within 7

days of the initial interview. I also understand that whether I participate or not, or even if I change my mind after first agreeing to participate will in no way affect (participant's name) continuing healthcare.

I understand that my participation in the study is confidential. The information will be used only for this research and publications and seminars arising from this research project, and that no material which could identify me will be used in any reports on this study.

I understand I will not receive compensation for participating in the study. I understand that the study will be stopped if it should appear harmful to me and know whom to contact if I have any side effects to this study.

I consent to my interview being audio taped **YES /NO**

I wish to receive a copy of the results **YES/NO**

I _____ (full name) hereby consent to take part in this study

Signature: _____ Date: _____

Project explained by: Peter Watts
Principal Investigator

Signature: _____ Date: _____

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